```
     FILE 'HCAPLUS' ENTERED AT 09:00:59 ON 09 JUN 2009
L1       204990 S CONJUGATE OR PENDANT OR ATTACHMENT OR LINKER
L2       151514 S GLYCOSYLAT? OR POLYSACCHARIDE OR OLIGOSACCHARIDE
L3         2275 S REDUCING END
L4           68 S L1 AND L2 AND L3
L5           43 S L4 AND (PY<2003 OR AY<2003 OR PRY<2003)

     FILE 'STNGUIDE' ENTERED AT 09:02:13 ON 09 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 09:08:56 ON 09 JUN 2009
L6         23093 S MALEIMIDE OR (VINYL SULFONE) OR IODOACETAMIDE OR (ORTHOPYRIDY
L7             0 S L5 AND L6

     FILE 'STNGUIDE' ENTERED AT 09:09:00 ON 09 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 09:12:16 ON 09 JUN 2009
L8             1 S L2 AND L3 AND L6
```

```
=> file registry
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.22       0.22

FILE 'REGISTRY' ENTERED AT 16:19:57 ON 08 JUN 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2009 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    7 JUN 2009  HIGHEST RN 1153571-52-8
DICTIONARY FILE UPDATES:   7 JUN 2009  HIGHEST RN 1153571-52-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 9, 2009.

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=>
Uploading C:\Program Files\STNEXP\Queries\10568111sialic.str
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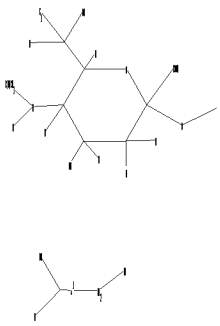
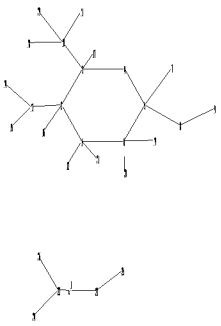




chain nodes :
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 29

ring nodes :
1 2 3 4 5 6
chain bonds :
1-12 1-21 2-13 2-16 3-10 3-17 5-7 5-8 6-19 6-20 8-9 10-11 10-18 10-29
13-14 13-15 22-23 22-24 22-26 23-25
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6
exact/norm bonds :
1-2 1-6 1-12 2-3 2-13 3-4 4-5 5-6 5-8 8-9 10-11 10-29 13-14 22-26
exact bonds :
1-21 2-16 3-10 3-17 5-7 6-19 6-20 10-18 13-15 22-23 22-24 23-25

G1:H,[*1]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS

21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 26:CLASS 29:CLASS

L1   STRUCTURE UPLOADED

=> s l1
SAMPLE SEARCH INITIATED 16:20:10 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -   795 TO ITERATE

100.0% PROCESSED   795 ITERATIONS   50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

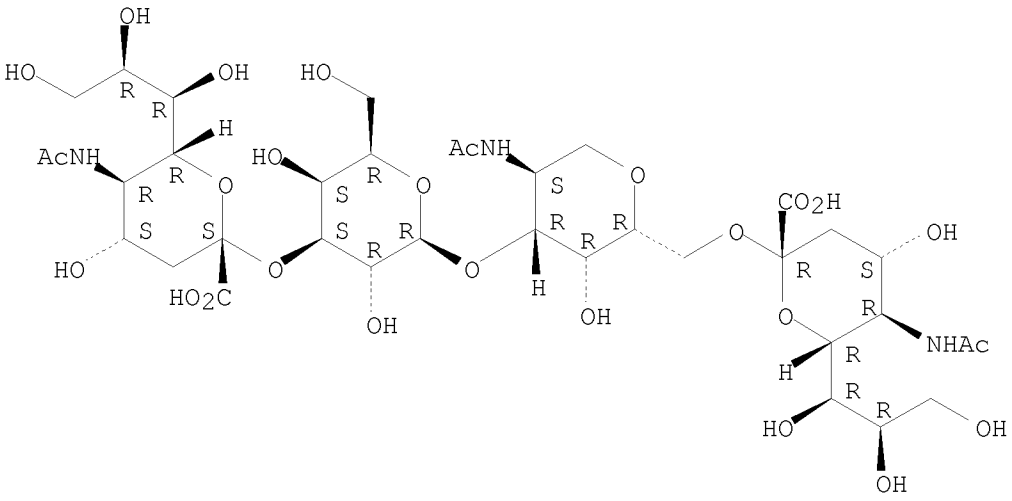
FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS: 14209 TO   17591
PROJECTED ANSWERS: 2318 TO   3802

L2   50 SEA SSS SAM L1

=> d l2 scan

L2   50 ANSWERS   REGISTRY COPYRIGHT 2009 ACS on STN
IN   INDEX NAME NOT YET ASSIGNED
MF   C36 H59 N3 O26

Absolute stereochemistry.

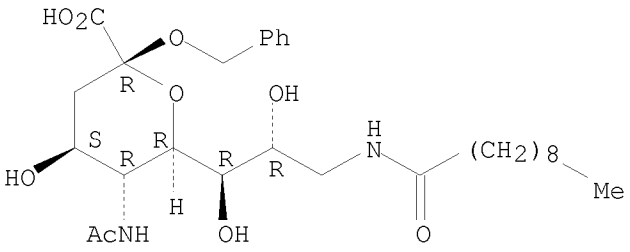


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

L2   50 ANSWERS   REGISTRY COPYRIGHT 2009 ACS on STN
IN   α-Neuraminic acid, N-acetyl-9-deoxy-9-[(1-oxodecyl)amino]-2-O-
     (phenylmethyl)-
MF   C28 H44 N2 O9
CI   COM

Absolute stereochemistry. Rotation (-).

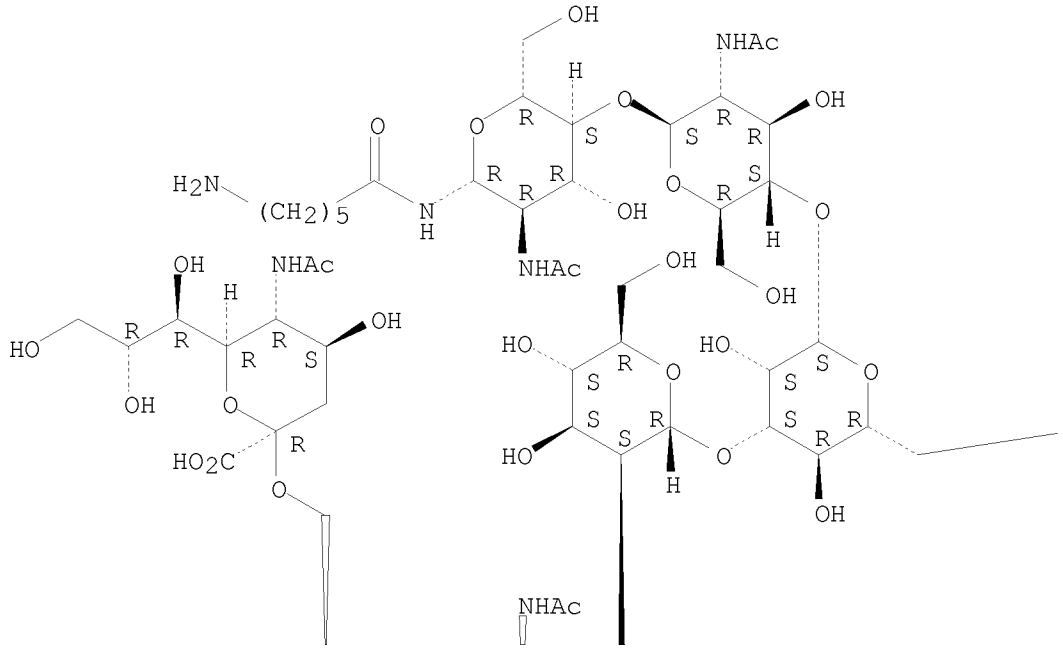


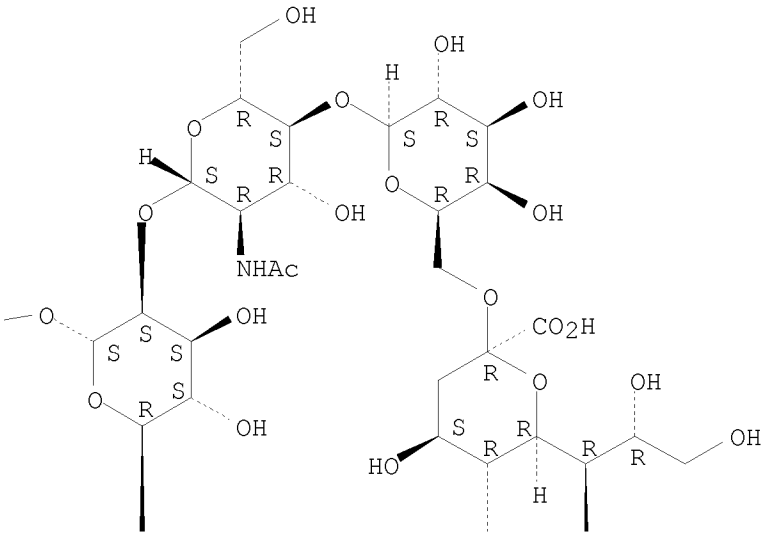
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Hexanamide, N-[O-(N-acetyl-α-neuraminosyl)-(2→6)-O-β-D-galactopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→2)-O-α-D-mannopyranosyl-(1→3)-O-[O-(N-acetyl-α-neuraminosyl)-(2→6)-O-β-D-galactopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→2)-O-[O-(N-acetyl-α-neuraminosyl)-(2→6)-O-β-D-galactopyranosyl-(1→4)-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→6)]-α-D-mannopyranosyl-(1→6)]-O-β-D-mannopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→4)-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl]-6-amino- (9CI)
MF C115 H190 N10 O80

Absolute stereochemistry.

PAGE 1-A




OH
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H
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O
R
S
S
S
R
O
R
H
S
R
R
O
R
OH
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O
NHAc
O
CO2H
S
S
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OH
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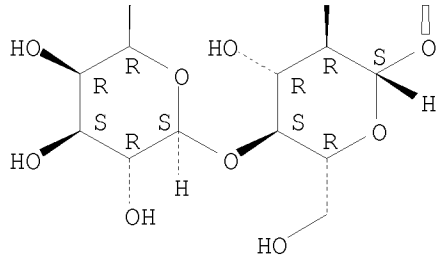
R
R
OH
HO
R
R
OH
H


HO
R
O
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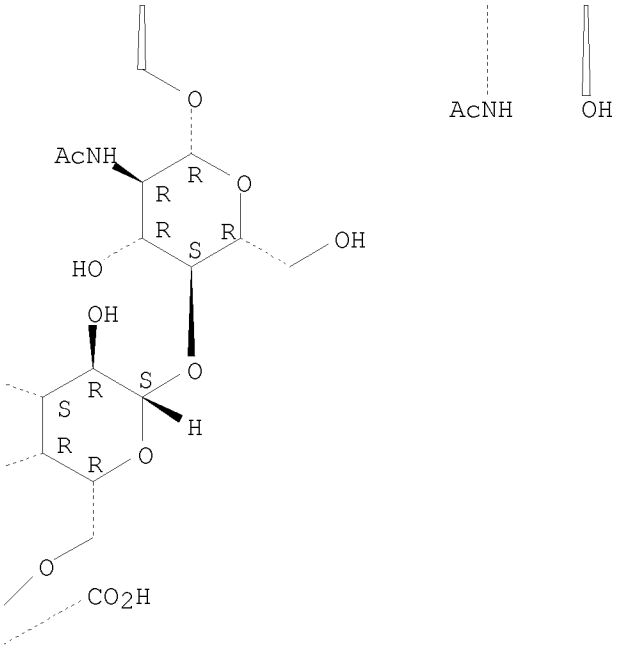
R
H
R
O
O
H
OH
HO

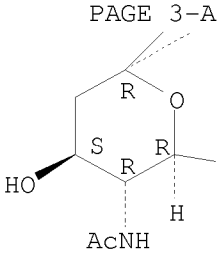

HO


HO

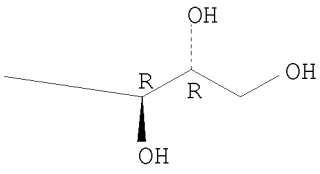
PAGE 2-B



PAGE 3-A



PAGE 3-B

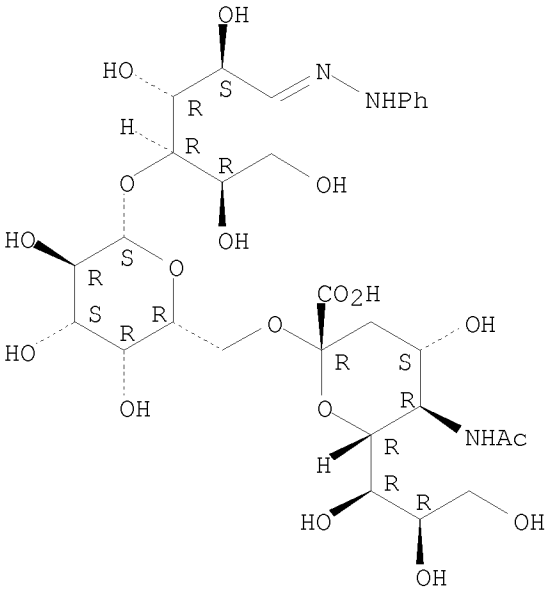


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L2 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN D-Glucose, O-(N-acetyl-α-neuraminosyl)-(2→6)-O-β-D-

galactopyranosyl-(1→4)-, 1-(phenylhydrazone) (9CI)
MF C29 H45 N3 O18

Absolute stereochemistry.
Double bond geometry unknown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.44	1.66

SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 16:21:29 ON 08 JUN 2009

Connecting via Winsock to STN

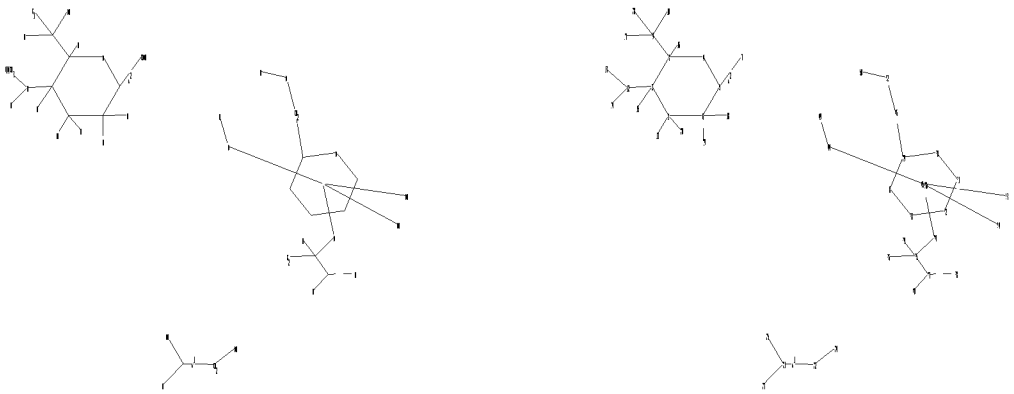
Welcome to STN International! Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:
* * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 16:32:53 ON 08 JUN 2009
FILE 'REGISTRY' ENTERED AT 16:32:53 ON 08 JUN 2009

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	1.44	1.66

=>
Uploading C:\Program Files\STNEXP\Queries\10568111sialicnot.str



chain nodes :
7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 28 34 35
36 37 38 39 40 44 46 49 50 52 53 54
ring nodes :
1 2 3 4 5 6 8 29 30 31 32 33
chain bonds :
1-11 1-20 2-12 2-15 3-9 3-16 5-7 6-18 6-19 9-10 9-17 9-28 12-13 12-14
21-22 21-23 21-25 22-24 29-46 34-35 35-36 35-37 35-39 37-38 37-40 44-49
46-52 50-52

ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-33 8-29 29-30 30-31 31-32 32-33
exact/norm bonds :
1-2 1-6 1-11 2-3 2-12 3-4 4-5 5-6 8-33 8-29 9-10 9-28 12-13 21-25
29-30
30-31 31-32 32-33 34-35 35-36 37-38
exact bonds :
1-20 2-15 3-9 3-16 5-7 6-18 6-19 9-17 12-14 21-22 21-23 22-24 29-46
35-37 35-39 37-40 44-49 46-52 50-52

G1:H,[*1]

G2:H,CH2

G3:O,CH2

G4:H,[*2]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS
21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 28:CLASS 29:Atom 30:Atom
31:Atom 32:Atom
33:Atom 34:CLASS 35:CLASS 36:CLASS 37:CLASS 38:CLASS 39:CLASS 40:CLASS
42:CLASS 44:CLASS
45:CLASS 46:CLASS 49:CLASS 50:CLASS 52:CLASS 53:CLASS 54:CLASS 55:CLASS
56:CLASS

L3   STRUCTURE UPLOADED

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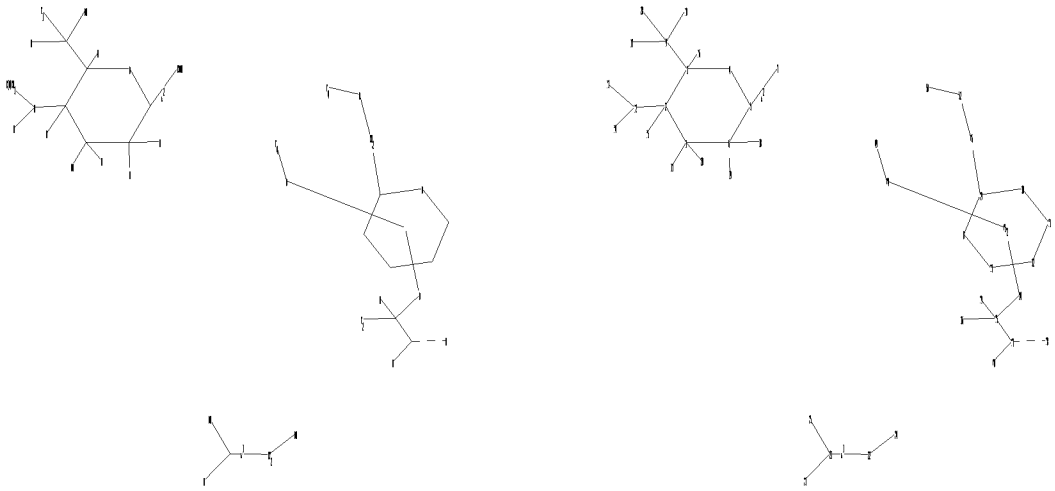


chain nodes :
7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 28 34 35
36 37 38 39 40 44 46 49 50 52
ring nodes :
1 2 3 4 5 6 8 29 30 31 32 33
chain bonds :
1-11 1-20 2-12 2-15 3-9 3-16 5-7 6-18 6-19 9-10 9-17 9-28 12-13 12-14
21-22 21-23 21-25 22-24 29-46 34-35 35-36 35-37 35-39 37-38 37-40 44-49
46-52 50-52

ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-33 8-29 29-30 30-31 31-32 32-33
exact/norm bonds :
1-2 1-6 1-11 2-3 2-12 3-4 4-5 5-6 8-33 8-29 9-10 9-28 12-13 21-25
29-30
30-31 31-32 32-33 34-35 35-36 37-38 44-49 50-52
exact bonds :
1-20 2-15 3-9 3-16 5-7 6-18 6-19 9-17 12-14 21-22 21-23 22-24 29-46
35-37 35-39 37-40 46-52

G1:H,[*1]

G2:H,CH2

G3:O,CH2

G4:H,[*2]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS
21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 28:CLASS 29:Atom 30:Atom
31:Atom 32:Atom
33:Atom 34:CLASS 35:CLASS 36:CLASS 37:CLASS 38:CLASS 39:CLASS 40:CLASS
42:CLASS 44:CLASS
45:CLASS 46:CLASS 49:CLASS 50:CLASS 52:CLASS

L4   STRUCTURE UPLOADED

=> s l4
SAMPLE SEARCH INITIATED 16:33:33 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -   6179 TO ITERATE

 32.4% PROCESSED   2000 ITERATIONS   50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS: 118867 TO   128293
PROJECTED ANSWERS: 9592 TO   12404

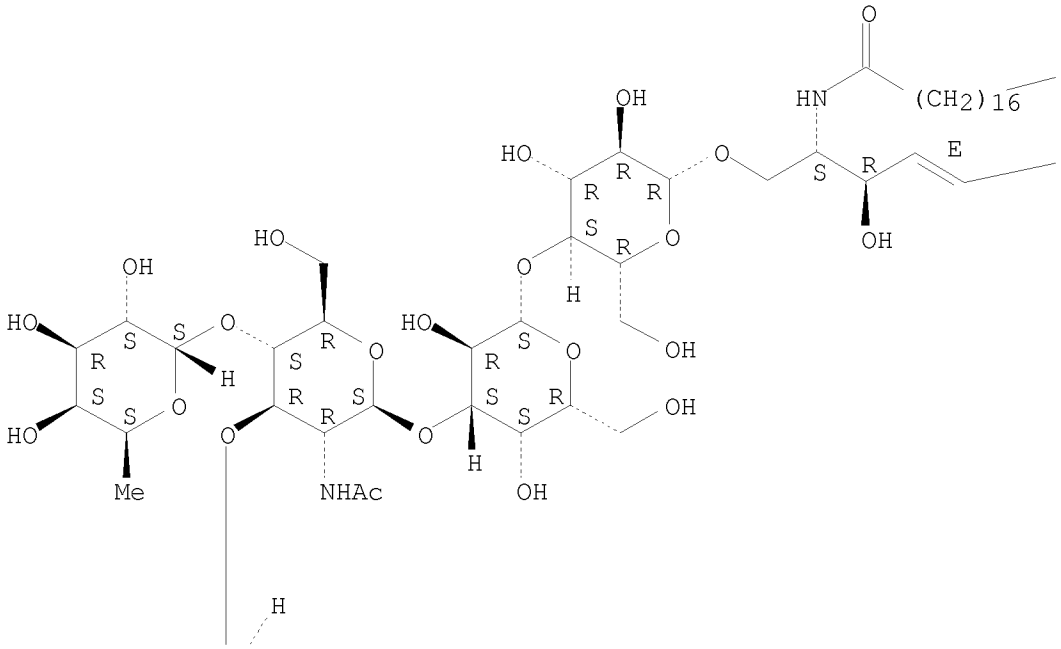
L5   50 SEA SSS SAM L4

=> d l5 scan

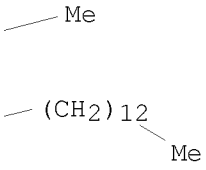
L5   50 ANSWERS   REGISTRY COPYRIGHT 2009 ACS on STN
IN   Octadecanamide, N-[(1S,2R,3E)-1-[[[O-6-deoxy-α-L-galactopyranosyl-
     (1→4)-O-[β-D-galactopyranosyl-(1→3)]-O-2-(acetylamino)-
     2-deoxy-β-D-glucopyranosyl-(1→3)-O-β-D-galactopyranosyl-
     (1→4)-β-D-glucopyranosyl]oxy]methyl]-2-hydroxy-3-heptadecen-1-
     yl]-
MF   C68 H124 N2 O27

Absolute stereochemistry.
Double bond geometry as shown.

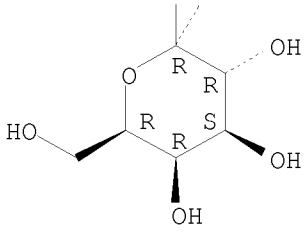
PAGE 1-A



PAGE 1-B



PAGE 2-A



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):
Uploading

```
'UPLOAD SSTN' IS NOT VALID HERE

To display more answers, enter the number of answers you would like to
see.  To end the display, enter "NONE", "N", "0", or "END".
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):C:\Program
Files\STNEXP\Queries\10568111sialic3.str
 YOU WISH TO SCAN? (1):
'0 SZ' @-#&1~" J*' IS NOT VALID HERE

To display more answers, enter the number of answers you would like to
see.  To end the display, enter "NONE", "N", "0", or "END".
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):
'0 SZ' @-#&1~" J*' IS NOT VALID HERE

To display more answers, enter the number of answers you would like to
see.  To end the display, enter "NONE", "N", "0", or "END".
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):
'0 SZ' @-#&1~" J*' IS NOT VALID HERE

To display more answers, enter the number of answers you would like to
see.  To end the display, enter "NONE", "N", "0", or "END".
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):
'0 SZ' @-#&1~" J*' IS NOT VALID HERE

To display more answers, enter the number of answers you would like to
see.  To end the display, enter "NONE", "N", "0", or "END".
HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=>
Uploading C:\Program Files\STNEXP\Queries\10568111sialic3.str
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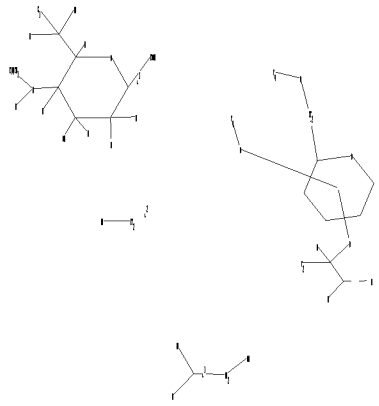
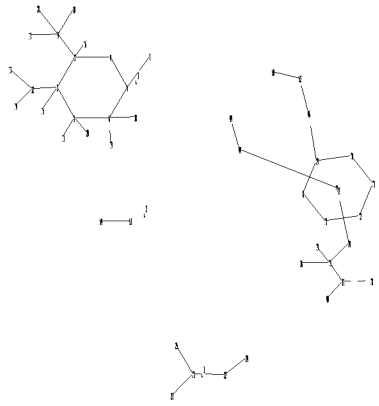




chain nodes :
7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 28 34 35
36 37 38 39 40 44 46 49 50 52 53 54
ring nodes :
1 2 3 4 5 6 8 29 30 31 32 33
chain bonds :
1-11 1-20 2-12 2-15 3-9 3-16 5-7 6-18 6-19 9-10 9-17 9-28 12-13 12-14
21-22 21-23 21-25 22-24 29-46 34-35 35-36 35-37 35-39 37-38 37-40 44-49
46-52 50-52
53-54
ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-33 8-29 29-30 30-31 31-32 32-33
exact/norm bonds :
1-2 1-6 1-11 2-3 2-12 3-4 4-5 5-6 8-33 8-29 9-10 9-28 12-13 21-25
29-30
30-31 31-32 32-33 34-35 35-36 37-38 44-49 50-52
exact bonds :
1-20 2-15 3-9 3-16 5-7 6-18 6-19 9-17 12-14 21-22 21-23 22-24 29-46
35-37 35-39 37-40 46-52 53-54

G1:H,[*1]

G2:H,[*2]

G3:O,CH2

G4:H,[*3]

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:CLASS 9:CLASS 10:CLASS
11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS
19:CLASS 20:CLASS
21:CLASS 22:CLASS 23:CLASS 24:CLASS 25:CLASS 28:CLASS 29:Atom 30:Atom
31:Atom 32:Atom
33:Atom 34:CLASS 35:CLASS 36:CLASS 37:CLASS 38:CLASS 39:CLASS 40:CLASS
42:CLASS 44:CLASS
45:CLASS 46:CLASS 49:CLASS 50:CLASS 52:CLASS 53:CLASS 54:CLASS

L6   STRUCTURE UPLOADED

=> s l6
SAMPLE SEARCH INITIATED 16:36:10 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -   6179 TO ITERATE

 32.4% PROCESSED   2000 ITERATIONS   50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS: 118867 TO   128293
PROJECTED ANSWERS: 9592 TO   12404

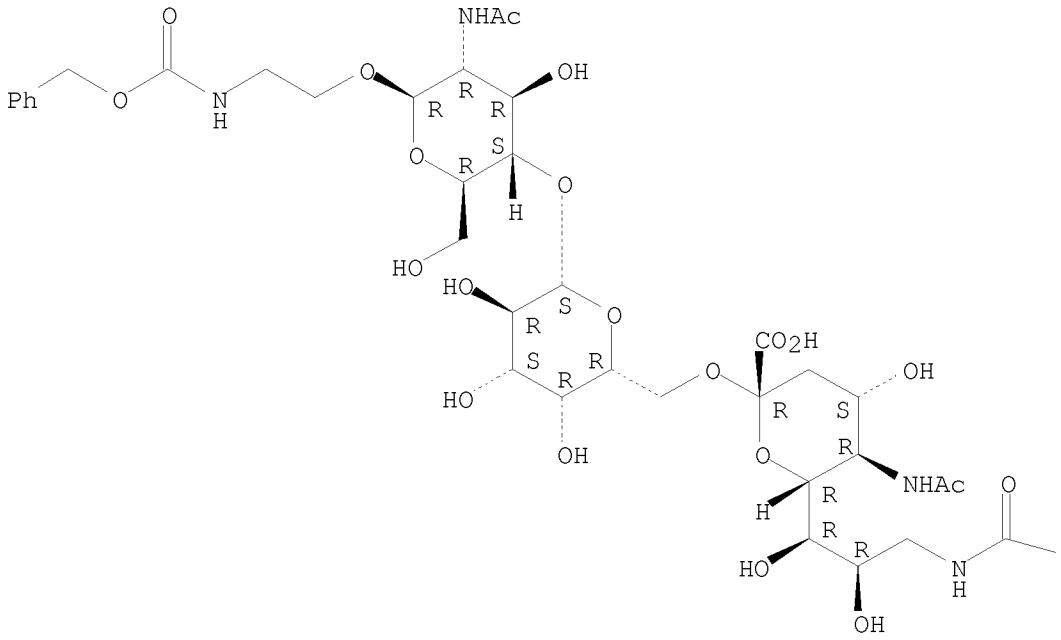
L7   50 SEA SSS SAM L6

=> d l7 scan

L7   50 ANSWERS   REGISTRY COPYRIGHT 2009 ACS on STN
IN   Carbamic acid, N-[2-[[O-[N-acetyl-9-deoxy-9-[(3-methyl-1-oxobutyl)amino]-
     α-neuraminosyl]-(2→6)-O-β-D-galactopyranosyl-
     (1→4)-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl]oxy]ethyl]-,
     phenylmethyl ester
MF   C40 H62 N4 O21

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

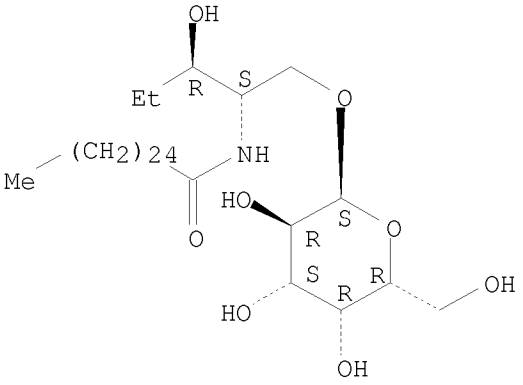
Bu-i

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):2

L7 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN D-erythro-Pentitol, 2,4,5-trideoxy-1-O-α-D-galactopyranosyl-2-[(1-oxohexacosyl)amino]-
MF C37 H73 N O8

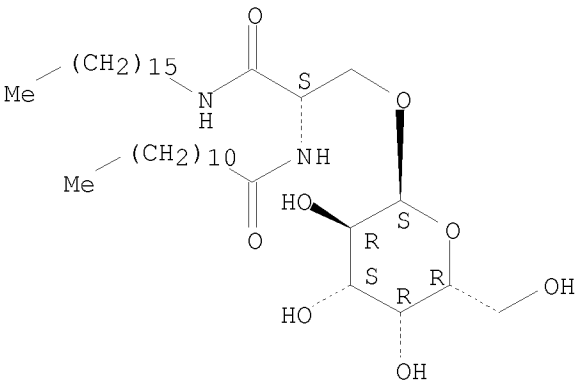
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L7 50 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN Dodecanamide, N-[(1S)-1-[(α-D-galactopyranosyloxy)methyl]-2-(hexadecylamino)-2-oxoethyl]-
MF C37 H72 N2 O8

Absolute stereochemistry.



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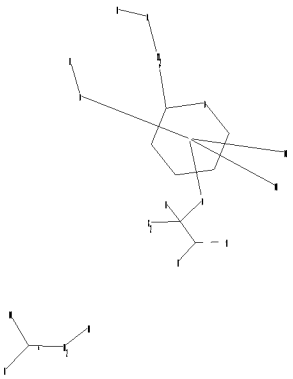

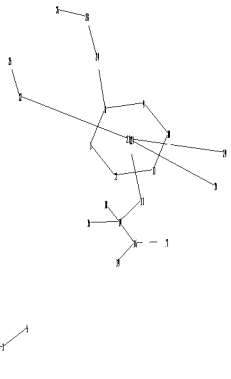

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2 3 4 5 6 13 14 15 16 17 18 19 22 24 25 26 28 29 30
ring nodes :
1 8 9 10 11 12
chain bonds :
2-3 2-4 2-6 3-5 8-24 13-14 14-15 14-16 14-18 16-17 16-19 22-25 24-28
26-28
ring bonds :
1-12 1-8 8-9 9-10 10-11 11-12
exact/norm bonds :
1-12 1-8 2-6 8-9 9-10 10-11 11-12 13-14 14-15 16-17
exact bonds :
2-3 2-4 3-5 8-24 14-16 14-18 16-19 22-25 24-28 26-28

G2:H,CH2

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 8:Atom 9:Atom 10:Atom
11:Atom
12:Atom 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 18:CLASS 19:CLASS
21:CLASS 22:CLASS
23:CLASS 24:CLASS 25:CLASS 26:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS
32:CLASS

L8 STRUCTURE UPLOADED

=> s l8
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SAMPLE SCREEN SEARCH COMPLETED - 1952 TO ITERATE

100.0% PROCESSED 1952 ITERATIONS 8 ANSWERS
SEARCH TIME: 00.00.01

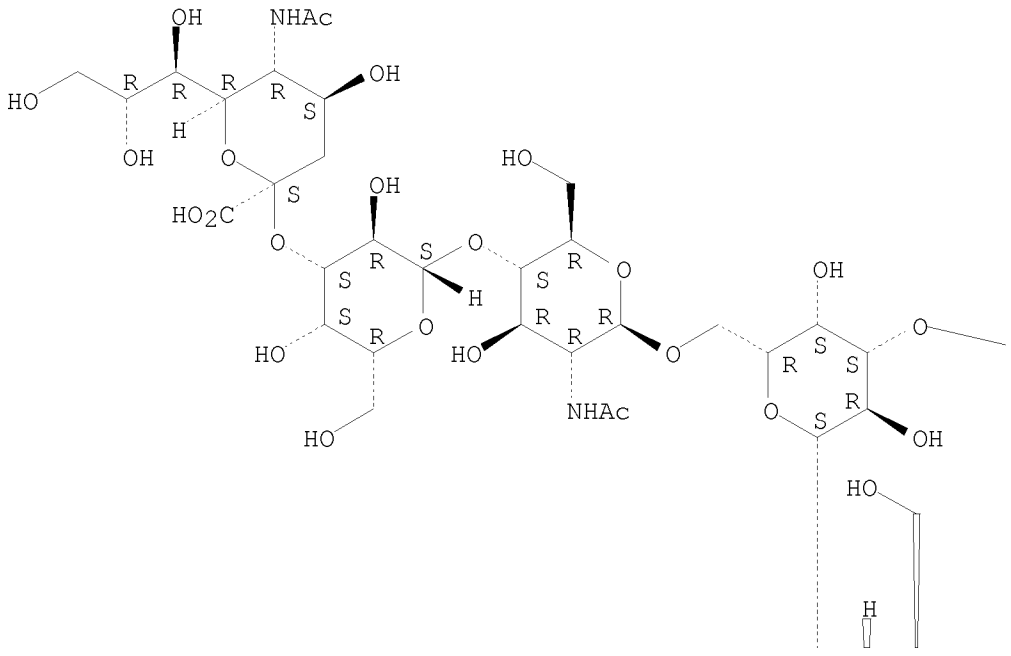
FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 36390 TO 41690
PROJECTED ANSWERS: 8 TO 328

L9 8 SEA SSS SAM L8

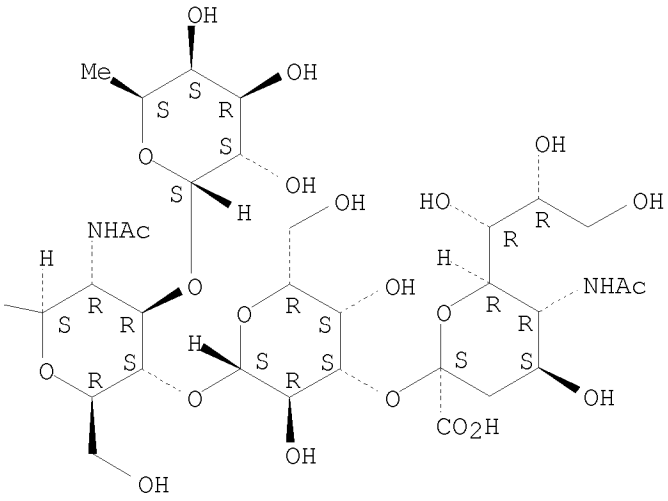
=> d l9 scan

L9 8 ANSWERS REGISTRY COPYRIGHT 2009 ACS on STN
IN D-Galactose, O-(N-acetyl-α-neuraminosyl)-(2→3)-O-β-D-galactopyranosyl-(1→4)-O-[6-deoxy-α-L-galactopyranosyl-(1→3)]-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→3)-O-[O-(N-acetyl-α-neuraminosyl)-(2→3)-O-β-D-galactopyranosyl-(1→4)-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→6)]-O-β-D-galactopyranosyl-(1→4)-O-2-(acetylamino)-2-deoxy-β-D-glucopyranosyl-(1→6)-O-[β-D-galactopyranosyl-(1→3)]-2-(acetylamino)-2-deoxy- (9CI)
MF C84 H138 N6 O61

Absolute stereochemistry.



PAGE 1-B



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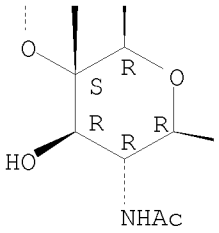

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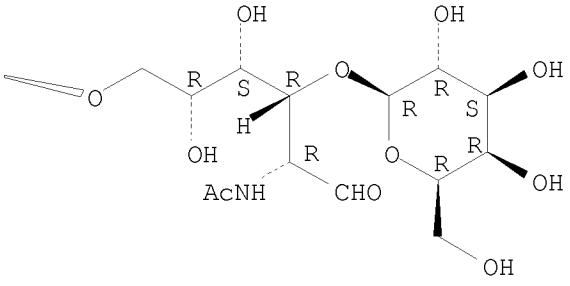

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

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HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       5.28       5.50

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 16:37:56 ON 08 JUN 2009

Connecting via Winsock to STN



Welcome to STN International!  Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 16:39:11 ON 08 JUN 2009
FILE 'REGISTRY' ENTERED AT 16:39:11 ON 08 JUN 2009
COPYRIGHT (C) 2009 American Chemical Society (ACS)

COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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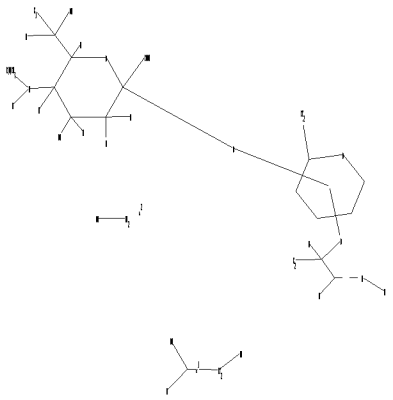

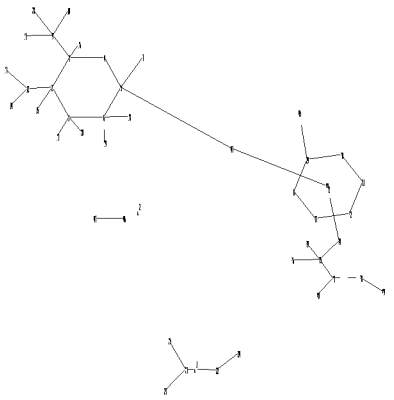

chain nodes :
7 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 28 34 35
36 37 38 39 40 43 45 46 47 49
ring nodes :
1 2 3 4 5 6 8 29 30 31 32 33
chain bonds :
1-11 1-20 2-12 2-15 3-9 3-16 5-7 5-43 6-18 6-19 9-10 9-17 9-28 12-13
12-14 21-22 21-23 21-25 22-24 29-45 34-35 35-36 35-37 35-39 37-38 37-40
38-49 46-47

ring bonds :
1-2 1-6 2-3 3-4 4-5 5-6 8-33 8-29 29-30 30-31 31-32 32-33
exact/norm bonds :
1-2 1-6 1-11 2-3 2-12 3-4 4-5 5-6 5-43 8-33 8-29 9-10 9-28 12-13 21-25
29-30 30-31 31-32 32-33 34-35 35-36 37-38 38-49
exact bonds :
1-20 2-15 3-9 3-16 5-7 6-18 6-19 9-17 12-14 21-22 21-23 22-24 29-45
35-37 35-39 37-40 46-47

G1:H,[*1]

G2:H,[*2]

Match level :

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44:CLASS  45:CLASS  46:CLASS  47:CLASS  49:CLASS



L10     STRUCTURE UPLOADED

=> s l10
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SAMPLE SCREEN SEARCH COMPLETED -       20 TO ITERATE

100.0% PROCESSED       20 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          132 TO      668
PROJECTED ANSWERS:               0 TO        0

L11           0 SEA SSS SAM L10

=> s l10 sss full
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100.0% PROCESSED      321 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

L12           0 SEA SSS FUL L10

=> file stnguisde
'STNGUISDE' IS NOT A VALID FILE NAME
SESSION CONTINUES IN FILE 'REGISTRY'
Enter "HELP FILE NAMES" at an arrow prompt (=>) for a list of files
that are available.  If you have requested multiple files, you can
specify a corrected file name or you can enter "IGNORE" to continue
accessing the remaining file names entered.

=> file stnguide
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                     192.12     192.34

FILE 'STNGUIDE' ENTERED AT 16:40:25 ON 08 JUN 2009
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun  5, 2009 (20090605/UP).

=> file hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.28     192.62
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FILE 'HCAPLUS' ENTERED AT 16:42:44 ON 08 JUN 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 8 Jun 2009 VOL 150 ISS 24
FILE LAST UPDATED: 7 Jun 2009 (20090607/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s polysialic or colominic

```
           823 POLYSIALIC
           305 COLOMINIC
L13       1072 POLYSIALIC OR COLOMINIC
```

=> s conjugate or linker or (drug delivery) or pendant

```
         78186 CONJUGATE
         27794 LINKER
        869285 DRUG
        332506 DELIVERY
        235006 DRUG DELIVERY
                  (DRUG(W)DELIVERY)
         16972 PENDANT
L14     348355 CONJUGATE OR LINKER OR (DRUG DELIVERY) OR PENDANT
```

=> s maleimide or (vinyl sulfone) or iodoacetamide or vinylsulfone or (orthopyridyl
disulfide)

```
         15692 MALEIMIDE
        447171 VINYL
         43334 SULFONE
          2506 VINYL SULFONE
                  (VINYL(W)SULFONE)
          5158 IODOACETAMIDE
           546 VINYLSULFONE
             6 ORTHOPYRIDYL
        121187 DISULFIDE
```

```
             5 ORTHOPYRIDYL DISULFIDE
               (ORTHOPYRIDYL(W)DISULFIDE)
L15      23501 MALEIMIDE OR (VINYL SULFONE) OR IODOACETAMIDE OR VINYLSULFONE
               OR (ORTHOPYRIDYL DISULFIDE)

=> s l13 and l14 and l15

L16          3 L13 AND L14 AND L15

=> s l16 and (PY<2004 or AY<2004 or PRY<2004)

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       4799838 AY<2004
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L17          2 L16 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> file stnguide

COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
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FULL ESTIMATED COST                                   2.85     195.47

FILE 'STNGUIDE' ENTERED AT 16:42:52 ON 08 JUN 2009
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun  5, 2009 (20090605/UP).

=> d l17 1-2 ti abs bib
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y



L17  ANSWER 1 OF 2  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Fractionation of charged polysaccharide
AB   Polydisperse and charged polysaccharides are fractionated into low
     polydispersity fractions (preferably having Mw/Mn<1.1), each containing
     species within a narrow range of mol. wts.  An aqueous solution of the
     polydisperse polysaccharides is contacted with an ion exchange resin in a
     column and the polysaccharides are subjected to selective elution by aqueous
     elution buffer.  The selective elution consists of at least 3 sequential
     elution buffers having different and constant ionic strength and/or pH and
     in which the subsequent buffers have ionic strength and/or pH than those
     of the preceding step.  The new prepns. are particularly suitable for the
     production of polysialic acid-derivatized therapeutic agents
     intended for use in humans and animals.
AN   2006:149931  HCAPLUS <<LOGINID::20090608>>
DN   144:214631
TI   Fractionation of charged polysaccharide
IN   Jain, Sanjay; Papaioannou, Ioannis; Laing, Peter
PA   Lipoxen Technologies Limited, UK
SO   PCT Int. Appl., 77 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 3
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2006016161        A1    20060216    WO 2005-GB3149         20050812
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WO 2005016974 A1 20050224 WO 2004-GB3511 20040812 <--
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EP 1789454 A1 20070530 EP 2005-794240 20050812
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CN 101039964 A 20070919 CN 2005-80034509 20050812
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IN 2007DN01099 A 20070427 IN 2007-DN1099 20070209
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PRAI WO 2004-GB3511 A 20040812
EP 2005-251016 A 20050223
EP 2003-254989 A 20030812 <--
WO 2005-GB3149 W 20050812
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of amino acid-containing poly-sialic acid derivatives used for drug delivery systems and their binding to proteins
AB A poly-sialic acid compound is reacted with a hetero-bifunctional reagent to introduce a pendant functional group for site-specific conjugation to sulfhydryl groups, for instance side chains of cysteine units in drugs, drug delivery systems, proteins or peptides. The functional group is, for instance, an N-maleimide group. Thus, colominic acid derivs. were prepared and used for drug delivery systems and their binding to proteins.
AN 2005:161032 HCAPLUS <<LOGINID::20090608>>
DN 142:261738
TI Preparation of amino acid-containing poly-sialic acid derivatives used for drug delivery systems and their binding to proteins
IN Hreczuk-Hirst, Dale Howard; Jain, Sanjay; Laing, Peter; Gregoriadis, Gregory; Papaioannou, Iaonnis
PA Lipoxen Technologies Limited, UK
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3
PATENT NO. KIND DATE APPLICATION NO. DATE

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     IN 2009DN00812        A     20090529    IN 2009-DN812           20090203 <--
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     EP 2005-251015        A     20050223
     WO 2005-GB3160        W     20050812
OS   CASREACT 142:261738; MARPAT 142:261738
RE.CNT  7     THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> file hcaplus
COST IN U.S. DOLLARS                              SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   0.07     204.46

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                   0.00      -1.64

FILE 'HCAPLUS' ENTERED AT 16:43:32 ON 08 JUN 2009
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FILE COVERS 1907 - 8 Jun 2009  VOL 150 ISS 24
FILE LAST UPDATED: 7 Jun 2009  (20090607/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Feb 2009

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

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http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s l13 and l14
L18         78 L13 AND L14

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       4799838 AY<2004
       4272526 PRY<2004
L19         42 L18 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> file stnguide
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 2.85     207.31

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)    SINCE FILE      TOTAL
                                                   ENTRY    SESSION
CA SUBSCRIBER PRICE                                 0.00      -1.64

FILE 'STNGUIDE' ENTERED AT 16:43:47 ON 08 JUN 2009
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun  5, 2009 (20090605/UP).

=> file hcaplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
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	ENTRY	SESSION
FULL ESTIMATED COST	0.07	207.38

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-1.64

FILE 'HCAPLUS' ENTERED AT 16:44:06 ON 08 JUN 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 8 Jun 2009 VOL 150 ISS 24
FILE LAST UPDATED: 7 Jun 2009 (20090607/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

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=> s l13 and l15
L20          3 L13 AND L15

=> s l20 not l16
L21          0 L20 NOT L16

=> d his

     (FILE 'HOME' ENTERED AT 16:19:50 ON 08 JUN 2009)

     FILE 'REGISTRY' ENTERED AT 16:19:57 ON 08 JUN 2009
L1             STRUCTURE UPLOADED
L2           50 S L1
L3             STRUCTURE UPLOADED
L4             STRUCTURE UPLOADED
L5           50 S L4
L6             STRUCTURE UPLOADED
L7           50 S L6
L8             STRUCTURE UPLOADED
L9            8 S L8
L10            STRUCTURE UPLOADED
L11           0 S L10
L12           0 S L10 SSS FULL
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     FILE 'STNGUIDE' ENTERED AT 16:40:25 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:42:44 ON 08 JUN 2009
L13         1072 S POLYSIALIC OR COLOMINIC
L14       348355 S CONJUGATE OR LINKER OR (DRUG DELIVERY) OR PENDANT
L15        23501 S MALEIMIDE OR (VINYL SULFONE) OR IODOACETAMIDE OR VINYLSULFONE
L16            3 S L13 AND L14 AND L15
L17            2 S L16 AND (PY<2004 OR AY<2004 OR PRY<2004)

     FILE 'STNGUIDE' ENTERED AT 16:42:52 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:43:09 ON 08 JUN 2009

     FILE 'STNGUIDE' ENTERED AT 16:43:10 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:43:32 ON 08 JUN 2009
L18           78 S L13 AND L14
L19           42 S L18 AND (PY<2004 OR AY<2004 OR PRY<2004)

     FILE 'STNGUIDE' ENTERED AT 16:43:47 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:44:06 ON 08 JUN 2009
L20            3 S L13 AND L15
L21            0 S L20 NOT L16

=> log hold
COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   2.85     210.23

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                   0.00      -1.64

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 16:44:28 ON 08 JUN 2009

Connecting via Winsock to STN



Welcome to STN International!  Enter x:X

LOGINID:SSPTAEXO1623

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'HCAPLUS' AT 16:47:09 ON 08 JUN 2009
FILE 'HCAPLUS' ENTERED AT 16:47:09 ON 08 JUN 2009
COPYRIGHT (C) 2009 AMERICAN CHEMICAL SOCIETY (ACS)s

COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
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FULL ESTIMATED COST                                   2.85     210.23

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)      SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                   0.00      -1.64
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=> s reducing end
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        627187 END
L22       2275 REDUCING END
                (REDUCING(W)END)

=> s l19 and l22
L23          1 L19 AND L22

=> d l23 ti abs bib

L23  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Sialic acid derivatives for protein derivatization and conjugation
AB   Derivs. are synthesized of starting materials, usually polysaccharides,
     having sialic acid at the reducing terminal end, in which the reducing
     terminal unit is transformed into an aldehyde group.  Where the
     polysaccharide has a sialic acid unit at the non-reducing
     end it may be passivated, for instance by converting into
     hydroxyl-substituted moiety.  The derivs. may be reacted with substrates,
     for instance containing amine or hydrazine groups, to form non-cross-linked
     polysialylated compds.  The substrates may, for instance, be
     therapeutically useful drugs peptides or proteins or drug
     delivery systems.  Insulin and polysialylated insulin were tested
     for their ability to reduce blood glucose level in normal female T/O
     outbred mice (22-24 g body weight).
AN   2005:158700  HCAPLUS <<LOGINID::20090608>>
DN   142:240674
TI   Sialic acid derivatives for protein derivatization and conjugation
IN   Jain, Sanjay; Laing, Peter; Gregoriadis, Gregory; Hreczuk-Hrist, Dale
     Howard; Papaoannou, Yiannis
PA   Lipoxen Technologies Limited, UK
SO   PCT Int. Appl., 82 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 3
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
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     EP 1654290          A1    20060510    EP 2004-768074         20040812 <--
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     JP 2007501889         T     20070201    JP 2006-523058         20040812 <--
     RU 2333223            C2    20080910    RU 2006-107546         20040812 <--
     WO 2006016161         A1    20060216    WO 2005-GB3149         20050812
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            ZA, ZM, ZW
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            IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
            CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
            GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM
     EP 1789454          A1    20070530    EP 2005-794240         20050812
         R:  AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
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     CN 101039964        A     20070919    CN 2005-80034509       20050812
     JP 2008510024       T     20080403    JP 2007-525353         20050812
     US 20070191597      A1    20070816    US 2006-568043         20061201 <--
     US 20080132696      A1    20080605    US 2007-660133         20070828
PRAI EP 2003-254989      A     20030812  <--
     WO 2004-GB3511      W     20040812
     EP 2005-251016      A     20050223
     WO 2005-GB3149      W     20050812
OS   MARPAT 142:240674
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> file stnguide
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       8.70     216.08

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -0.82      -2.46

FILE 'STNGUIDE' ENTERED AT 16:47:33 ON 08 JUN 2009
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun  5, 2009 (20090605/UP).

=> file hcaplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.28     216.36

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                       0.00      -2.46

FILE 'HCAPLUS' ENTERED AT 16:49:42 ON 08 JUN 2009
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 8 Jun 2009 VOL 150 ISS 24
FILE LAST UPDATED: 7 Jun 2009 (20090607/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s l13 and (l14 or l15)

L24   78 L13 AND (L14 OR L15)

=> s protein or peptide or polypeptide or glycoprotein

       2315027 PROTEIN
        418900 PEPTIDE
        112737 POLYPEPTIDE
        110979 GLYCOPROTEIN
L25   2629522 PROTEIN OR PEPTIDE OR POLYPEPTIDE OR GLYCOPROTEIN

=> s conjugation or derivative or derivatized

         54356 CONJUGATION
         62679 DERIVATIVE
         18422 DERIVATIZED
L26   134666 CONJUGATION OR DERIVATIVE OR DERIVATIZED

=> s l24 and l25 and l26

L27   14 L24 AND L25 AND L26

=> s l27 and (PY<2004 or AY<2004 or PRY<2004)

      24035559 PY<2004
       4799838 AY<2004
       4272526 PRY<2004
L28   8 L27 AND (PY<2004 OR AY<2004 OR PRY<2004)

=> file stnguide

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	2.85	219.21

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-2.46

FILE 'STNGUIDE' ENTERED AT 16:49:50 ON 08 JUN 2009

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun 5, 2009 (20090605/UP).

=> d l28 1-8 ti abs bib
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L28 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Sialic acid derivatives
AB An amine or hydrazide derivative of a sialic acid unit, e.g. in a polysaccharide, is reacted with a bifunctional reagent at least one of the functionalities of which is an ester of N-hydroxy succinimide, to form an amide or hydrazide product. The product has a useful functionality, which allows it to be conjugated, for instance to proteins, drugs, drug delivery systems or the like. The process is of particular utility for derivatizing amine groups introduced in sialic acid terminal groups of polysialic acids.
AN 2006:152761 HCAPLUS <<LOGINID::20090608>>
DN 144:214632
TI Sialic acid derivatives
IN Jain, Sanjay; Papaioannou, Ioannis; Thobhani, Smita
PA Lipoxen Technologies Limited, UK
SO PCT Int. Appl., 51 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006016168	A2	20060216	WO 2005-GB3160	20050812
	WO 2006016168	A3	20060504		
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	WO 2005016973	A1	20050224	WO 2004-GB3488	20040812 <--
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	EP 1776389	A2	20070425	EP 2005-794259	20050812
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     CN 101039965          A     20070919    CN 2005-80034588       20050812
     JP 2008510025         T     20080403    JP 2007-525356         20050812
     WO 2006090119         A1    20060831    WO 2006-GB540          20060216
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     EP 1853634            A1    20071114    EP 2006-709777         20060216
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     IN 2007DN01100        A     20070427    IN 2007-DN1100         20070209
     US 20070282096        A1    20071206    US 2007-660128         20070713
     US 20080262209        A1    20081023    US 2007-816823         20070821
     CN 101160326          A     20080409    CN 2006-80012749       20071017
PRAI WO 2004-GB3488        A     20040812
     EP 2005-251015        A     20050223
     EP 2003-254988        A     20030812  <--
     EP 2003-255200        A     20030821  <--
     EP 2005-251017        A     20050223
     WO 2005-GB3160        W     20050812
     WO 2006-GB540         W     20060216
OS   MARPAT 144:214632
RE.CNT  3     THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28  ANSWER 2 OF 8  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Preparation of amino acid-containing poly-sialic acid derivatives used for
     drug delivery systems and their binding to proteins
AB   A poly-sialic acid compound is reacted with a hetero-bifunctional reagent to
     introduce a pendant functional group for site-specific
     conjugation to sulfhydryl groups, for instance side chains of
     cysteine units in drugs, drug delivery systems,
     proteins or peptides.  The functional group is, for instance, an N-
     maleimide group.  Thus, colominic acid derivs. were
     prepared and used for drug delivery systems and their
     binding to proteins.
AN   2005:161032  HCAPLUS <<LOGINID::20090608>>
DN   142:261738
TI   Preparation of amino acid-containing poly-sialic acid derivatives used for
     drug delivery systems and their binding to proteins
IN   Hreczuk-Hirst, Dale Howard; Jain, Sanjay; Laing, Peter; Gregoriadis,
     Gregory; Papaioannou, Iaonnis
PA   Lipoxen Technologies Limited, UK
SO   PCT Int. Appl., 33 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 3
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2005016973       A1     20050224    WO 2004-GB3488         20040812 <--
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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EP 1654289 A1 20060510 EP 2004-768054 20040812 <--
EP 1654289 B1 20071003
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AT 374788 T 20071015 AT 2004-768054 20040812 <--
ES 2294535 T3 20080401 ES 2004-768054 20040812 <--
RU 2327703 C2 20080627 RU 2006-107545 20040812 <--
WO 2006016168 A2 20060216 WO 2005-GB3160 20050812
WO 2006016168 A3 20060504
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ZA, ZM, ZW
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KG, KZ, MD, RU, TJ, TM
EP 1776389 A2 20070425 EP 2005-794259 20050812
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IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR
CN 101039965 A 20070919 CN 2005-80034588 20050812
JP 2008510025 T 20080403 JP 2007-525356 20050812
KR 2006085329 A 20060726 KR 2006-702875 20060210 <--
IN 2006DN00903 A 20070810 IN 2006-DN903 20060221 <--
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US 20070282096 A1 20071206 US 2007-660128 20070713
IN 2009DN00812 A 20090529 IN 2009-DN812 20090203 <--
PRAI EP 2003-254988 A 20030812 <--
EP 2003-255200 A 20030821 <--
WO 2004-GB3488 W 20040812
EP 2005-251015 A 20050223
WO 2005-GB3160 W 20050812
OS CASREACT 142:261738; MARPAT 142:261738
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Sialic acid derivatives for protein derivatization and conjugation
AB Derivs. are synthesized of starting materials, usually polysaccharides, having sialic acid at the reducing terminal end, in which the reducing terminal unit is transformed into an aldehyde group. Where the polysaccharide has a sialic acid unit at the non-reducing end it may be passivated, for instance by converting into hydroxyl-substituted moiety. The derivs. may be reacted with substrates, for instance containing amine or hydrazine groups, to form non-cross-linked polysialylated compds. The

substrates may, for instance, be therapeutically useful drugs peptides or proteins or drug delivery systems. Insulin and polysialylated insulin were tested for their ability to reduce blood glucose level in normal female T/O outbred mice (22-24 g body weight).

AN 2005:158700 HCAPLUS <<LOGINID::20090608>>

DN 142:240674

TI Sialic acid derivatives for protein derivatization and conjugation

IN Jain, Sanjay; Laing, Peter; Gregoriadis, Gregory; Hreczuk-Hrist, Dale Howard; Papaoannou, Yiannis

PA Lipoxen Technologies Limited, UK

SO PCT Int. Appl., 82 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005016974	A1	20050224	WO 2004-GB3511	20040812 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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	EP 1654290	A1	20060510	EP 2004-768074	20040812 <--
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	JP 2007501889	T	20070201	JP 2006-523058	20040812 <--
	RU 2333223	C2	20080910	RU 2006-107546	20040812 <--
	WO 2006016161	A1	20060216	WO 2005-GB3149	20050812
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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	EP 1789454	A1	20070530	EP 2005-794240	20050812
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	CN 101039964	A	20070919	CN 2005-80034509	20050812
	JP 2008510024	T	20080403	JP 2007-525353	20050812
	US 20070191597	A1	20070816	US 2006-568043	20061201 <--
	US 20080132696	A1	20080605	US 2007-660133	20070828
PRAI	EP 2003-254989	A	20030812 <--		
	WO 2004-GB3511	W	20040812		
	EP 2005-251016	A	20050223		
	WO 2005-GB3149	W	20050812		

OS MARPAT 142:240674

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Polysialylated insulin: synthesis, characterization and biological activity in vivo
AB Polysialic acids (PSA) (colominic acid; CA) of 22 and 39 kDa average mol. weight were oxidized with sodium periodate at carbon 7 of the nonreducing end to form an aldehyde group. The oxidized CAs (96-99% oxidation) were then reacted with the amino groups of recombinant human insulin at various CA/insulin molar ratios (25:1 to 150:1 range) for up to 48 h in the presence of sodium cyanoborohydride (reductive amination). Polysialylated insulin conjugates were precipitated (together with intact nonreacted insulin, if any) at time intervals from the reaction mixts. with ammonium sulfate, further purified by size exclusion chromatog. and/or ion exchange chromatog. (IEC), and the final conjugates assayed for PSA and protein. Results showed an initial rapid conjugation rate peaking at about 12 h, to form a plateau over a period of 12-48 h. Moreover, the extent of polysialylation (CA/insulin molar ratios in the conjugate) was dependent on the PSA used, the initial CA/insulin molar ratios in the reaction mixture and the time of the coupling reaction. Thus at 48 h of incubation, CA/insulin molar ratios in the conjugates were 1.60-1.74 for the 22-kDa CA and 2.37-2.45 for the 39-kDa CA. SDS-PAGE of intact insulin and insulin reacted with non-oxidized CA for 48 h revealed well-resolved single bands which migrated similar distances in the gel. On the other hand, polysialylated (22-kDa CA) insulin yielded multiple diffused bands suggesting heterogenicity as a result of differential polysialylation. The pharmacol. activity of polysialylated insulin was compared with that of intact insulin in normal female outbred T/O mice. After s.c. injection of intact insulin (0.3 units per mouse), blood glucose levels were reduced to nadir values at 1 h to return to normal at 3 h. In contrast, blood glucose levels in animals injected with polysialylated insulin (0.3 units or protein equivalence for polysialylated insulin), having attained nadir values also at 1 h, returned to normal levels after 6 h (39 kDa) and 9 h (22 kDa CA-insulin). It is concluded that polysialylation offers a promising strategy for the enhancement of the therapeutic value of insulin and other pharmacol. active peptides.
AN 2003:485968 HCAPLUS <<LOGINID::20090608>>
DN 139:191811
TI Polysialylated insulin: synthesis, characterization and biological activity in vivo
AU Jain, Sanjay; Hreczuk-Hirst, Dale H.; McCormack, Brenda; Mital, Malini; Epenetos, Agamemnon; Laing, Peter; Gregoriadis, Gregory
CS Lipoxen Technologies Limited, London, UK
SO Biochimica et Biophysica Acta, General Subjects (2003), 1622(1), 42-49
CODEN: BBGSB3; ISSN: 0304-4165
PB Elsevier B.V.
DT Journal
LA English
RE.CNT 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Serological and conformational properties of E. coli K92 capsular polysaccharide and its N-propionylated derivative both illustrate that induced antibody does not recognize extended epitopes of polysialic acid: implications for a comprehensive conjugate vaccine against groups B and C N. meningitidis
AB The capsular polysaccharide of E. coli K92 (K92P) contains elements in

common with the capsular polysaccharides of both groups B and C N. meningitidis, and may therefore form the basis of a bivalent vaccine. To augment the cross-protective immune response to group B meningococci, the N-acetyl groups of the K92P were replaced by N-propionyl groups (NPrK92P) and conjugated to protein. This strategy had previously been applied with success to the poorly immunogenic capsular polysaccharide of group B meningococcus (GBMP), and the bactericidal epitope was exclusively mimicked by extended helical segments of the NPrGBMP. The NPrK92P-conjugate, in relation to a K92P-conjugate, failed to enhance the response to GBMP but did generate a measurable response to NPrGBMP, but only at the expense of a greatly reduced GCMP response. Despite the presence of an immune response to NPrGBMP, the anti-NPrK92 serum was not bactericidal. Competitive inhibition studies with NPrGBMP oligosaccharides suggested the NPrK92 antibodies could not cross-react with the protective epitope on group B meningococci, as defined by extended helical segments of the NPrGBMP, but only recognized short non-bactericidal NPrGBMP epitopes. This hypothesis was supported from the conformational and mol. dynamics studies of the K92P, which demonstrated a lack of extended conformations that resemble the GBMP extended epitope. Indeed, the conformational properties of the K92P more closely resembled those of the GCMP, thereby explaining the observed moderate cross-protection of the K92P antiserum towards group C meningococci. Thus, K92P, regardless of N-propionyl modification, will not serve as an effective single vaccine component against both groups B and C meningococci.

AN 2002:790634 HCAPLUS <<LOGINID::20090608>>

DN 138:54108

TI Serological and conformational properties of E. coli K92 capsular polysaccharide and its N-propionylated derivative both illustrate that induced antibody does not recognize extended epitopes of polysialic acid: implications for a comprehensive conjugate vaccine against groups B and C N. meningitidis

AU Pon, Robert A.; Khieu, Nam Huan; Yang, Qing-Ling; Brisson, Jean-Robert; Jennings, Harold J.

CS Institute of Biological Sciences, National Research Council of Canada, Ottawa, ON, K1A 0R6, Can.

SO Canadian Journal of Chemistry (2002), 80(8), 1055-1063
CODEN: CJCHAG; ISSN: 0008-4042

PB National Research Council of Canada

DT Journal

LA English

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 6 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN

TI Derivatization of proteins for prolonged circulation and enhanced storage stability

AB Proteins are derivatized by reaction of pendant groups, usually groups which are side chains in non-terminal amino acyl units of the protein, in aqueous reactions in the presence of a denaturant. The denaturant is preferably an amphiphilic compound, most preferably an anionic amphiphilic compound such as a long chain alkyl sulfate mono ester, preferably an alkaline metal salt, for instance sodium dodecyl sulfate. The degree of derivatization is increased, while the protein retains activity, such as enzyme activity. The increase in the degree of derivatization enhances the increase in circulation time in vivo and stability on storage in vitro. Preferably the derivatizing reagent is an aldehyde compound which reacts with primary amine groups, generally the epsilon-amino group of lysyl units. Derivatization is conducted under reducing conditions to generate a secondary amine derivative For example, IgG was subjected to derivatization with polysialic acid (oxidized colominic acid) or monomethoxy poly(ethylene

glycol) succinimidyl succinate in the absence and presence of 10-3M sodium dodecyl sulfate (SDS). The presence of SDS increased the level of derivatization for a PEG reagent as well as for a polysialic acid reagent. The PEG reagent gave a higher degree of substitution than the colominic acid reagent.

AN 2001:851191 HCAPLUS <<LOGINID::20090608>>

DN 135:376868

TI Derivatization of proteins for prolonged circulation and enhanced storage stability

IN Gregoriadis, Gregory

PA Lipoxen Technologies Limited, UK

SO PCT Int. Appl., 19 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001087922	A2	20011122	WO 2001-GB2115	20010514 <--
	WO 2001087922	A3	20030530		
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1335931	A2	20030820	EP 2001-931843	20010514 <--
	EP 1335931	B1	20051221		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2003533537	T	20031111	JP 2001-585141	20010514 <--
	AT 313554	T	20060115	AT 2001-931843	20010514 <--
	ES 2256234	T3	20060716	ES 2001-931843	20010514 <--
	US 20030129159	A1	20030710	US 2002-276552	20021118 <--
	US 6962972	B2	20051108		
PRAI	EP 2000-304108	A	20000516	<--	
	WO 2001-GB2115	W	20010514	<--	

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 7 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN

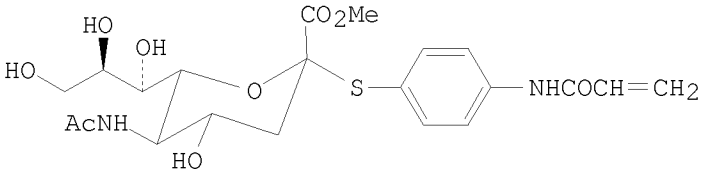
TI Bactericidal monoclonal antibodies that define unique meningococcal B polysaccharide epitopes that do not cross-react with human polysialic acid

AB The poor immunogenicity of the Neisseria meningitidis group B polysaccharide capsule, a homopolymer of α(2→8) sialic acid, has been attributed to immunol. tolerance induced by prenatal exposure to host polysialyated glycoproteins. Substitution of N-propionyl (N-Pr) for N-acetyl groups on the meningococcal B polysaccharide, and conjugation of the resulting polysaccharide to a protein carrier, have been reported to yield a conjugate vaccine that elicits protective Abs with minimal autoantibody activity. To characterize the protective epitopes on the derivatized polysaccharide, we isolated 30 anti-N-Pr meningococcal B polysaccharide mAbs. These Abs were heterogeneous with respect to complement-mediated bactericidal activity, fine antigenic specificity, and autoantibody activity as defined by binding to the neuroblastoma cell line, CHP-134,

which expresses long-chain α(2→8)-linked polysialic acid. Eighteen of the Abs could activate complement-mediated bacteriolysis. Seven of these 18 Abs cross-reacted with N-acetyl meningococcal B polysaccharide by ELISA and had strong autoantibody activity. Thus, N-Pr meningococcal B polysaccharide conjugate vaccine has the potential to elicit autoantibodies. However, 7 of the 18 bactericidal mAbs had no detectable autoantibody activity. These Abs may be useful for the identification of mol. mimetics capable of eliciting protective Abs specific to the bacteria, without the risk of evoking autoimmune disease.

AN 1998:302506 HCAPLUS <<LOGINID::20090608>>
DN 129:80386
OREF 129:16597a,16600a
TI Bactericidal monoclonal antibodies that define unique meningococcal B polysaccharide epitopes that do not cross-react with human polysialic acid
AU Granoff, Dan M.; Bartoloni, Antonella; Ricci, Stefano; Gallo, Eugenia; Rosa, Domenico; Ravenscroft, Neil; Guarnieri, Valentina; Seid, Robert C.; Shan, Asra; Usinger, William R.; Tan, Siqi; Mchugh, Yvonne E.; Moe, Gregory R.
CS Chiron Vaccines, Emeryville, CA, 94608, USA
SO Journal of Immunology (1998), 160(10), 5028-5036
CODEN: JOIMA3; ISSN: 0022-1767
PB American Association of Immunologists
DT Journal
LA English
RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L28 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Michael addition of poly-L-lysine to N-acryloylated sialosides. Syntheses of influenza A virus haemagglutinin inhibitor and Group B meningococcal polysaccharide vaccines
GI



I

AB N-acryloylated sialoside derivs., e.g. I, are directly conjugated to poly-L-lysine and protein carriers by the 1,4-conjugate addns. of their Nε-lysine residues to provide new glycoconjugates with potential therapeutic utilities.

AN 1993:255321 HCAPLUS <<LOGINID::20090608>>
DN 118:255321
OREF 118:44393a,44396a
TI Michael addition of poly-L-lysine to N-acryloylated sialosides. Syntheses of influenza A virus haemagglutinin inhibitor and Group B meningococcal polysaccharide vaccines
AU Roy, Rene; Pon, Robert A.; Tropper, Francois D.; Andersson, Fredrik O.
CS Dep. Chem., Univ. Ottawa, Ottawa, ON, K1N 6N5, Can.
SO Journal of the Chemical Society, Chemical Communications (1986), (3), 264-5
CODEN: JCCCAT; ISSN: 0022-4936

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DT   Journal
LA   English


=> d his

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L2          50 S L1
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L4             STRUCTURE UPLOADED
L5          50 S L4
L6             STRUCTURE UPLOADED
L7          50 S L6
L8             STRUCTURE UPLOADED
L9           8 S L8
L10            STRUCTURE UPLOADED
L11          0 S L10
L12          0 S L10 SSS FULL

     FILE 'STNGUIDE' ENTERED AT 16:40:25 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:42:44 ON 08 JUN 2009
L13       1072 S POLYSIALIC OR COLOMINIC
L14     348355 S CONJUGATE OR LINKER OR (DRUG DELIVERY) OR PENDANT
L15      23501 S MALEIMIDE OR (VINYL SULFONE) OR IODOACETAMIDE OR VINYLSULFONE
L16          3 S L13 AND L14 AND L15
L17          2 S L16 AND (PY<2004 OR AY<2004 OR PRY<2004)

     FILE 'STNGUIDE' ENTERED AT 16:42:52 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:43:09 ON 08 JUN 2009

     FILE 'STNGUIDE' ENTERED AT 16:43:10 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:43:32 ON 08 JUN 2009
L18         78 S L13 AND L14
L19         42 S L18 AND (PY<2004 OR AY<2004 OR PRY<2004)

     FILE 'STNGUIDE' ENTERED AT 16:43:47 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:44:06 ON 08 JUN 2009
L20          3 S L13 AND L15
L21          0 S L20 NOT L16
L22       2275 S REDUCING END
L23          1 S L19 AND L22

     FILE 'STNGUIDE' ENTERED AT 16:47:33 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:49:42 ON 08 JUN 2009
L24         78 S L13 AND (L14 OR L15)
L25    2629522 S PROTEIN OR PEPTIDE OR POLYPEPTIDE OR GLYCOPROTEIN
L26     134666 S CONJUGATION OR DERIVATIVE OR DERIVATIZED
L27         14 S L24 AND L25 AND L26
L28          8 S L27 AND (PY<2004 OR AY<2004 OR PRY<2004)

     FILE 'STNGUIDE' ENTERED AT 16:49:50 ON 08 JUN 2009

     FILE 'HCAPLUS' ENTERED AT 16:49:58 ON 08 JUN 2009
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FILE 'STNGUIDE' ENTERED AT 16:49:59 ON 08 JUN 2009

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FULL ESTIMATED COST 0.07 246.20

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NEWS 4	APR 07	STN is raising the limits on saved answers
NEWS 5	APR 24	CA/CAplus now has more comprehensive patent assignee information
NEWS 6	APR 26	USPATFULL and USPAT2 enhanced with patent assignment/reassignment information
NEWS 7	APR 28	CAS patent authority coverage expanded
NEWS 8	APR 28	ENCOMPLIT/ENCOMPLIT2 search fields enhanced
NEWS 9	APR 28	Limits doubled for structure searching in CAS REGISTRY
NEWS 10	MAY 08	STN Express, Version 8.4, now available
NEWS 11	MAY 11	STN on the Web enhanced
NEWS 12	MAY 11	BEILSTEIN substance information now available on STN Easy
NEWS 13	MAY 14	DGENE, PCTGEN and USGENE enhanced with increased limits for exact sequence match searches and introduction of free HIT display format
NEWS 14	MAY 15	INPADOCDB and INPAFAMDB enhanced with Chinese legal status data
NEWS 15	MAY 28	CAS databases on STN enhanced with NANO super role in records back to 1992
NEWS 16	JUN 01	CAS REGISTRY Source of Registration (SR) searching enhanced on STN

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AND CURRENT DISCOVER FILE IS DATED 06 APRIL 2009.

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                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.22       0.22

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FILE LAST UPDATED: 8 Jun 2009  (20090608/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED:  Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE:  Feb 2009

HCAplus now includes complete International Patent Classification (IPC)
reclassification data for the third quarter of 2008.

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This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> S conjugate or pendant or attachment or linker
         78201 CONJUGATE
         16976 PENDANT
         86719 ATTACHMENT
         27805 LINKER
L1      204990 CONJUGATE OR PENDANT OR ATTACHMENT OR LINKER

=> s glycosylat? or polysaccharide or oligosaccharide
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         70290 POLYSACCHARIDE
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L2      151514 GLYCOSYLAT? OR POLYSACCHARIDE OR OLIGOSACCHARIDE

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        447473 REDUCING
        627393 END
L3        2275 REDUCING END
                (REDUCING(W)END)

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      22984153 PY<2003
       4507406 AY<2003
       3976839 PRY<2003
L5          43 L4 AND (PY<2003 OR AY<2003 OR PRY<2003)

=> d l5 1-43 ti

L5   ANSWER 1 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Amphiphilic starch and hydroxyethyl starch conjugates

L5   ANSWER 2 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Synthesis of water-soluble antibiotic-polysaccharide conjugates
     for use with reduced toxicity

L5   ANSWER 3 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Human airway mucin glycosylation: A combinatory of carbohydrate
     determinants which vary in cystic fibrosis

L5   ANSWER 4 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Towards a synthetic glycoconjugate vaccine against Neisseria meningitidis
     A

L5   ANSWER 5 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Non-perturbing Fluorescent Labeling of Polysaccharides

L5   ANSWER 6 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Neoglycoprotein cancer vaccines: synthesis of an azido derivative of GM3
     and its efficient coupling to proteins through a new linker

L5   ANSWER 7 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Solid phase syntheses of oligomannosides and of a lactosamine containing
     milk trisaccharide using a benzoate linker

L5   ANSWER 8 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   A highly efficient synthetic strategy for polymeric support synthesis of
     Lex, Ley, and H-type 2 oligosaccharides

L5   ANSWER 9 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   An efficient access to protected disialylated glycohexaosyl threonine
     present on the leukosialin of activated T-lymphocytes

L5   ANSWER 10 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Oligosaccharide-based bifunctional molecules for binding and
     regulating selectins and methods for their screening

L5   ANSWER 11 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   New Applications of the n-Pentenyl Glycoside Method in the Synthesis and
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Immunoconjugation of Fucosyl GM1: A Highly Tumor-Specific Antigen Associated with Small Cell Lung Carcinoma

L5 ANSWER 12 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Protein conjugates of synthetic saccharides elicit higher levels of serum IgG lipopolysaccharide antibodies in mice than do those of the O-specific polysaccharide from Shigella dysenteriae type 1

L5 ANSWER 13 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Synthesis and serological characterization of L-glycero-α-D-manno-heptopyranose-containing di- and tri-saccharides of the non-reducing terminus of the Escherichia coli K-12 LPS core oligosaccharide

L5 ANSWER 14 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of neoglycoproteins as drugs

L5 ANSWER 15 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Plant protein improvements by Maillard-type-protein-polysaccharide conjugation and reconstitution of peptides with microbial transglutaminase

L5 ANSWER 16 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Streptococcus pneumoniae type 14 polysaccharide-conjugate vaccines: length stabilization of opsonophagocytic conformational polysaccharide epitopes

L5 ANSWER 17 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Antigenic group B Streptococcus type II and type III polysaccharide fragments having a 2,5-anhydro-D-mannose terminal structure and conjugate vaccine thereof

L5 ANSWER 18 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Exploration of the action pattern of Streptomyces hyaluronate lyase using high-resolution capillary electrophoresis

L5 ANSWER 19 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Chitosan oligomer derivatives labeled with Gd-DTPA for use as magnetic resonance contrast agents

L5 ANSWER 20 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI New methods for improving the functionality of egg white proteins

L5 ANSWER 21 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI A new interpretation of the structure of the mycolyl-arabinogalactan complex of Mycobacterium tuberculosis as revealed through characterization of oligoglycosylalditol fragments by fast-atom bombardment mass spectrometry and 1H nuclear magnetic resonance spectroscopy

L5 ANSWER 22 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Reversal of tyrosinamide-oligosaccharide derivatization by Edman degradation

L5 ANSWER 23 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Lysine-glycosylated recombinant interleukin-2

L5 ANSWER 24 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Effect of cell attachment and growth on the synthesis and fate of dolichol-linked oligosaccharides in Chinese hamster ovary cells

L5 ANSWER 25 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Structures of sugar chains of hen egg yolk riboflavin-binding protein

L5 ANSWER 26 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Improvement of emulsifying properties of egg white proteins by the attachment of polysaccharide through Maillard reaction in a dry state

L5 ANSWER 27 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Electrophoresis-based sequencing of oligosaccharides

L5 ANSWER 28 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI An oligosaccharide-tetanus toxoid conjugate vaccine against type III group B Streptococcus

L5 ANSWER 29 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Hapten-protein conjugates with carbohydrate linkers and their use in antibody production and immunoassays

L5 ANSWER 30 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Monoclonal antibody to a determinant of an oligosaccharide having a 2,5-anhydrohexose residue at the reducing terminus, a process for its preparation, and its use

L5 ANSWER 31 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Antigenicity of dextran-protein conjugates in mice. Effect of molecular weight of the carbohydrate and comparison of two modes of coupling

L5 ANSWER 32 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI The intrinsic affinity constant (K) of anticapsular antibody to oligosaccharides of Haemophilus influenzae type b

L5 ANSWER 33 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Monoclonal antibodies specific for oligosaccharides prepared by partial nitrous acid deamination of heparin

L5 ANSWER 34 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Immunogenic conjugates for vaccines against childhood diseases.

L5 ANSWER 35 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Immunochemical characterization of polylysine conjugates containing reductively aminated cellulose oligosaccharides

L5 ANSWER 36 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Synthesis of tetrasaccharides related to the O-specific determinants of Salmonella serogroups A, B and D1

L5 ANSWER 37 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Synthesis of the branchpoint tetrasaccharide of the O-specific determinant of Salmonella serogroup B

L5 ANSWER 38 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Mercury iodide as a catalyst in oligosaccharide synthesis

L5 ANSWER 39 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Coupling of acid labile Salmonella specific oligosaccharides to macromolecular carriers

L5 ANSWER 40 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Acetylated methylmannose polysaccharide of Streptomyces griseus

L5 ANSWER 41 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Structure of the linkage region between the polysaccharide and

protein parts of Saccharomyces cerevisiae mannan

L5 ANSWER 42 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Use of 1-(7-aminophenyl)flavazoles for the preparation of immunogens with oligosaccharide determinant groups

L5 ANSWER 43 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation and structural studies of ovalbumin glycopeptides

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FULL ESTIMATED COST 22.04 22.26

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LAST RELOADED: Jun 5, 2009 (20090605/UP).

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COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 0.77 23.03

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FILE COVERS 1907 - 9 Jun 2009 VOL 150 ISS 24
FILE LAST UPDATED: 8 Jun 2009 (20090608/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

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substance identification.

=> s maleimide or (vinyl sulfone) or iodoacetamide or (orthopyridyl disulfide)

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         15695 MALEIMIDE
        447232 VINYL
         43339 SULFONE
          2507 VINYL SULFONE
                 (VINYL(W)SULFONE)
          5158 IODOACETAMIDE
             6 ORTHOPYRIDYL
        121204 DISULFIDE
             5 ORTHOPYRIDYL DISULFIDE
                 (ORTHOPYRIDYL(W)DISULFIDE)
L6       23093 MALEIMIDE OR (VINYL SULFONE) OR IODOACETAMIDE OR (ORTHOPYRIDYL
               DISULFIDE)
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=> s l5 and l6

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L7           0 L5 AND L6
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=> file stnguide

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                                                     ENTRY    SESSION
FULL ESTIMATED COST                                   2.85      25.88
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LAST RELOADED: Jun 5, 2009 (20090605/UP).

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COST IN U.S. DOLLARS                            SINCE FILE      TOTAL
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FULL ESTIMATED COST                                   0.35      26.23
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USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 9 Jun 2009 VOL 150 ISS 24
FILE LAST UPDATED: 8 Jun 2009 (20090608/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Feb 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Feb 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l5 1 2 4 10 11 12 14 15 17 23 26 28 39 42 ti abs bib

L5 ANSWER 1 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Amphiphilic starch and hydroxyethyl starch conjugates
AB The title conjugates, useful for preparation of parenterally administered colloidal drug delivery systems, comprise lipophilic anchor groups selectively bound on the reducing end of polysaccharide chain. The reducing end group is activated by oxidation to lactone group and the lipophilic mol. is coupled via NH2 group to the polysaccharide, e.g., by means of amidation or reductive amination. Thus, oxidation of hydroxyethyl starch (HES) (mol. weight 45,000 D) with 0.1 N iodine solution in H2O, in the presence of NaOH, gave a HES lactone which was dissolved in H2O and stirred overnight with H2NCH2CH2NH2·HCl and 1-ethyl-3-(3-dimethylamino)propyl carbodiimide at pH 4.8. Stirring of the latter with cholesteryl chloroformate for 24 h in DMSO gave cholesteryl HES derivative which was dissolved in H2O and emulsified with parenteral fat emulsion (Lipovenoes 10%) by use of ultrasound to give storage-stable HES-coated parenteral emulsion.
AN 2003:93118 HCAPLUS <<LOGINID::20090609>>
DN 138:139077
TI Amphiphilic starch and hydroxyethyl starch conjugates
IN Sommermeyer, Klaus
PA Supramol Parenteral Colloids G.m.b.H., Germany
SO Ger. Offen., 4 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 10135694	A1	20030206	DE 2001-10135694	20010721 <--
PRAI DE 2001-10135694		20010721 <--		

OS MARPAT 138:139077

L5 ANSWER 2 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Synthesis of water-soluble antibiotic-polysaccharide conjugates for use with reduced toxicity
AB The invention relates to novel pharmaceutical forms for amphotericin B, daunorubicin and doxorubicin, in which the known side effects (nephro- or cardiotoxicity) are reduced. The novel pharmaceutical forms are antibiotic-starch conjugates, wherein the antibiotic is combined with the polysaccharide at the reducing end thereof by means of a peptide bond formed between the reducing sugar and the antibiotic carbohydrate amine group. Thus, hydroxyethyl starch was oxidized using I2, and the oxidized starch coupled with amphotericin B to form a water-soluble derivative In vitro tests showed that the conjugate was hydrolyzed by a suspension of erythrocytes to provide free amphotericin B.
AN 2003:6000 HCAPLUS <<LOGINID::20090609>>
DN 138:56190

TI Synthesis of water-soluble antibiotic-polysaccharide conjugates
for use with reduced toxicity
IN Sommermeyer, Klaus
PA Fresenius Kabi Deutschland Gmbh, Germany
SO PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003000738	A2	20030103	WO 2002-EP6764	20020619 <--
	WO 2003000738	A3	20030828		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	DE 10129369	C1	20030306	DE 2001-10129369	20010621 <--
	CA 2446205	A1	20030103	CA 2002-2446205	20020619 <--
	AU 2002328294	A1	20030108	AU 2002-328294	20020619 <--
	EP 1397162	A2	20040317	EP 2002-762293	20020619 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	JP 2004534086	T	20041111	JP 2003-507141	20020619 <--
	CN 1596129	A	20050316	CN 2002-812195	20020619 <--
	IN 2003CN02013	A	20060106	IN 2003-CN2013	20031217 <--
	US 20040180858	A1	20040916	US 2003-481597	20031219 <--
	US 7115576	B2	20061003		
PRAI	DE 2001-10129369	A	20010621 <--		
	WO 2002-EP6764	W	20020619 <--		

OS MARPAT 138:56190
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Towards a synthetic glycoconjugate vaccine against Neisseria meningitidis A
AB Albumin conjugates of synthetic fragments of the capsular polysaccharide of the Gram-neg. bacterium Neisseria meningitidis serogroup A were prepared The fragments include monosaccharides α-D-ManpNAc-(1→O)-(CH2)2NH2 and 6-O-P(O)(O-)2-α-D-ManpNAc-(1→O)-(CH2)2NH2, disaccharide α-D-ManpNAc-[1→O-P(O)(O-)→6]-α-D-ManpNAc-(1→O)-(CH2)2NH2, and trisaccharide α-D-ManpNAc-[1→O-P(O)(O-)→6]-α-D-ManpNAc-[1→O-P(O)(O-)→6]-α-D-ManpNAc-(1→O)-(CH2)2NH2. Two monosaccharide blocks were employed as key intermediates. The reducing-end mannose unit featured the NHAc group at C-2, and contained the aminoethyl spacer as the aglycon for the final bioconjugation. The inter-residual phosphodiester linkages were fashioned from an anomerically positioned H-phosphonate group in a 2-azido-mannose building block. The spacer-linked saccharides were N-acylated with hepta-4,6-dienoic acid and the resulting conjugated diene-equipped saccharides were subjected to Diels - Alder-type addition with maleimidobutyryl-group functionalized human serum albumin to form covalent

conjugates containing up to 26 saccharide haptens per albumin mol. Complete 1H, 13C, and 31P NMR assignments are given. Antigenicity of the neoglycoconjugates was demonstrated by a double immunodiffusion assay which indicated that a fragment as small as a monosaccharide is recognized by a polyclonal meningococcus group A antiserum and that the O-acetyl group(s) present in the natural capsular material is not essential for antigenicity.

AN 2002:806294 HCAPLUS <<LOGINID::20090609>>
DN 138:170432
TI Towards a synthetic glycoconjugate vaccine against Neisseria meningitidis A
AU Berkin, Ali; Coxon, Bruce; Pozsgay, Vince
CS Laboratory of Developmental and Molecular Immunity, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892-2720, USA
SO Chemistry--A European Journal (2002), 8(19), 4424-4433
CODEN: CEUJED; ISSN: 0947-6539
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English
OS CASREACT 138:170432
RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Oligosaccharide-based bifunctional molecules for binding and regulating selectins and methods for their screening
AB The present invention provides novel bifunctional compds. for regulation of cellular adhesion and proliferation. The bifunctional compds. include a cell-adhesion oligosaccharide attached to a linker group by the reducing end of the cell-adhesion oligosaccharide or by a primary hydroxyl group and said linker group also attached to a nucleoside cyclic-3'-5' monophosphate or analog through a heterocyclic base. Specific oligosaccharide and nucleoside cyclic-3'-5' monophosphate and linkers are presented. The bifunctional compound can also be used to regulate cell proliferation by contacting a therapeutically effective amount of the bifunctional compound with a selectin. A method for screening compds. or other adhesion mols. with agonistic or antagonistic activity to cell proliferation comprises contacting the test compound with a selectin in a cell culture and measuring the growth of the cells in the cell culture, wherein a compound with agonistic activity will show increased cell growth or adhesion, and a compound with antagonistic activity will show decreased cell growth or adhesion over normal one.
AN 1999:763879 HCAPLUS <<LOGINID::20090609>>
DN 132:9016
TI Oligosaccharide-based bifunctional molecules for binding and regulating selectins and methods for their screening
IN Freidman, Jonathan
PA University of Houston, USA
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9961033	A1	19991202	WO 1999-US11300	19990521 <--

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN,

MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM,
TR, TT, UA, UG, US, UZ, VN, YU, ZW
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 9943105 A 19991213 AU 1999-43105 19990521 <--
PRAI US 1998-86442P P 19980522 <--
WO 1999-US11300 W 19990521 <--
RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI New Applications of the n-Pentenyl Glycoside Method in the Synthesis and Immunoconjugation of Fucosyl GM1: A Highly Tumor-Specific Antigen Associated with Small Cell Lung Carcinoma
AB The synthesis of fucosyl GM1 pentenyl glycoside 1b, and its conjugation to carrier protein KLH to give 1c is related. Bioconjugation of 1b was realized using the pendant olefin contained in the reducing end n-pentenyl glycoside (NPG). The key step of the endeavor is a stereospecific [3+3] coupling reaction using our sulfonamido glycosidation protocol. Pre-installation of the NPG was required for an optimal [3+3] coupling yield and to allow for smooth global deprotection. The synthesis and subsequent immuno-characterization served to confirm the assigned structure of the natural tumor antigen. Fully synthetic conjugate 1c advances our program toward the goal of using a synthetic vaccine containing fucosyl GM1 as a potential target for immune attack against small cell lung carcinoma.
AN 1999:718248 HCAPLUS <<LOGINID::20090609>>
DN 132:122837
TI New Applications of the n-Pentenyl Glycoside Method in the Synthesis and Immunoconjugation of Fucosyl GM1: A Highly Tumor-Specific Antigen Associated with Small Cell Lung Carcinoma
AU Allen, Jennifer R.; Danishefsky, Samuel J.
CS Laboratory of Bioorganic Chemistry, Sloan-Kettering Institute for Cancer Research, New York, NY, 10021, USA
SO Journal of the American Chemical Society (1999), 121(47), 10875-10882
CODEN: JACSAT; ISSN: 0002-7863
PB American Chemical Society
DT Journal
LA English
OS CASREACT 132:122837
RE.CNT 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 12 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Protein conjugates of synthetic saccharides elicit higher levels of serum IgG lipopolysaccharide antibodies in mice than do those of the O-specific polysaccharide from Shigella dysenteriae type 1
AB Our development of vaccines to prevent shigellosis is based on the hypothesis that a critical (protective) level of serum IgG to the O-specific polysaccharide (O-SP) domain of Shigella lipopolysaccharide (LPS) confers immunity. The O-SP is a hapten and must be conjugated to a protein to induce serum antibodies. The O-SP of Shigella dysenteriae type 1 (≈27 tetrasaccharide repeat units), prepared by acid hydrolysis of the LPS, was bound to human serum albumin (HSA) by multiple point attachment (O-SP-HSA): The molar ratio of HSA to O-SP was 1.0. Synthetic saccharides, composed of one or multiples of the O-SP tetrasaccharide, equipped with a spacer at their reducing end, were bound to HSA by a single point attachment: The average molar ratios of the saccharides to HSA ranged from 4 to 24. Serum IgG

anti-LPS, elicited in mice by O-SP-HSA or synthetic tetra-, octa-, dodeca-, and hexadecasaccharide fragments, was measured by ELISA. Outbred 6-wk-old female mice were injected s.c. three times at biweekly intervals with 2.5 μg of saccharide as a conjugate and were bled 7 days after the second and third injections. Excepting the tetramer, conjugates of the octamer, dodecamer and hexadecamer elicited IgG LPS antibodies after the second injection, a statistically significant rise (booster) after the third injection, and higher levels than those vaccinated with O-SP-HSA (P = 0.0001). The highest geometric mean levels of IgG anti-LPS were elicited by the hexadecamer with 9 chains or 9 mol of saccharide/HSA (15.5 ELISA units) followed by the octamer with 20 chains (11.1 ELISA units) and the dodecamer with 10 chains (9.52 ELISA units). Clin. evaluation of these synthetic saccharides bound to a medically useful carrier is planned.

AN 1999:306572 HCAPLUS <<LOGINID::20090609>>
DN 131:114986
TI Protein conjugates of synthetic saccharides elicit higher levels of serum IgG lipopolysaccharide antibodies in mice than do those of the O-specific polysaccharide from Shigella dysenteriae type 1
AU Pozsgay, Vince; Chu, Chiayung; Pannell, Lewis; Wolfe, Jennifer; Robbins, John B.; Schneerson, Rachel
CS Laboratory of Developmental and Molecular Immunity, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892-2720, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1999), 96(9), 5194-5197
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Preparation of neoglycoproteins as drugs
AB Polyamide conjugates (structures specified) comprising either (a) a xenoantigenic group or (b) a biol. active group and a macromol., macro- or microscopic entity bound to a polyamide backbone, processes for their preparation and their use in therapeutic compns., specifically for removing xenoantigenic antibodies from a xenograft recipient are claimed. The xenoantigenic group may be derived from an oligosaccharide, e.g., di-, tri- and pentasaccharide terminating with an α-linked D-galactopyranose or N-glycoyl neuraminic acid at its reducing end. For example, a single dose (1 mg/kg) of a conjugate prepared by binding (3-benzoyloxycarbonylamino)propyl-6-O-benzyl-2-deoxy-2-tetrachlorophthalimido-β-D-glucopyranoside (4-step preparation given) to N-(chloroacetyl)poly-L-lysine (mol. weight 150,000-300,000) [preparation by N-acylation of the parent poly-L-lysine-HBr with (ClCH2O)2O given] provoked IgG decrease in antibody titer in cynomolgus monkeys from 1.6 (the starting titer) to 0 after 1 h and recovered to 0.31 after 72 h. After the 2nd dose the titer dropped to 0 after 1 h and recovered to 0.21 after 168 h, and after the 3d dose the titer was 0.18 after 264 h and 0.73 after 672 h.

AN 1998:709093 HCAPLUS <<LOGINID::20090609>>
DN 129:331058
OREF 129:67530h,67531a
TI Preparation of neoglycoproteins as drugs
IN Duthaler, Rudolf; Katopodis, Andreas; Kinzy, Willy; Ohrlein, Reinhold; Thoma, Gebhard
PA Novartis A.-G., Switz.; Novartis-Erfindungen Verwaltungsgesellschaft m.b.H.

SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9847915	A1	19981029	WO 1998-EP2227	19980416 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2284729	A1	19981029	CA 1998-2284729	19980416 <--
AU 9876439	A	19981113	AU 1998-76439	19980416 <--
AU 733282	B2	20010510		
EP 970114	A1	20000112	EP 1998-924125	19980416 <--
EP 970114	B1	20060712		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, NL, SE, PT				
JP 2001500528	T	20010116	JP 1998-544969	19980416 <--
JP 3474583	B2	20031208		
CN 1185253	C	20050119	CN 1998-804283	19980416 <--
AT 332918	T	20060815	AT 1998-924125	19980416 <--
ES 2268776	T3	20070316	ES 1998-924125	19980416 <--
ZA 9803245	A	19981019	ZA 1998-3245	19980417 <--
US 6399071	B1	20020604	US 1999-403111	19991014 <--
US 20020164347	A1	20021107	US 2002-123396	20020416 <--
US 6723831	B2	20040420		

PRAI EP 1997-810243 A 19970418 <--
EP 1997-810244 A 19970418 <--
GB 1998-2450 A 19980205 <--
WO 1998-EP2227 W 19980416 <--
US 1999-403111 A1 19991014 <--

RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 15 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Plant protein improvements by Maillard-type-protein-polysaccharide conjugation and reconstitution of peptides with microbial transglutaminase
AB The functional properties of soy protein and wheat gluten were greatly improved by covalent attachment with polysaccharide through a spontaneous Maillard reaction between .vepsiln.-amino groups in protein and a reducing-end carbonyl group in polysaccharide. They were also improved by the reconstitution of peptide fragments with microbial transglutaminase. These processes were effective as well in reducing the bitterness and allergenic structure of plant protein peptides.
AN 1998:546899 HCAPLUS <<LOGINID::20090609>>
DN 129:289364
OREF 129:58965a,58968a
TI Plant protein improvements by Maillard-type-protein-polysaccharide conjugation and reconstitution of peptides with microbial transglutaminase
AU Kato, A.; Babiker, E. E.; Fujisawa, N.; Matsudomi, N.
CS Department of Biological Chemistry, Yamaguchi University, Yamaguchi, 753, Japan
SO Plant Proteins from European Crops (1998), 146-151. Editor(s): Gueguen, Jacques; Popineau, Yves. Publisher: Springer, Berlin, Germany.
CODEN: 66NVA8

DT Conference
LA English
RE.CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 17 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Antigenic group B Streptococcus type II and type III polysaccharide fragments having a 2,5-anhydro-D-mannose terminal structure and conjugate vaccine thereof
AB The process for depolymg. Group B types II and III Streptococcus is disclosed which results in polysaccharide fragments having a reducing end suitable for conjugating to protein. Conjugate mols., vaccines and their use to immunize mammals including humans are disclosed.
AN 1997:119215 HCAPLUS <<LOGINID::20090609>>
DN 126:130588
OREF 126:25225a,25228a
TI Antigenic group B Streptococcus type II and type III polysaccharide fragments having a 2,5-anhydro-D-mannose terminal structure and conjugate vaccine thereof
IN Michon, Francis; Catherine, Dong; Joseph, Y. Tai
PA North American Vaccine, Inc., USA
SO PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 9640795	A1	19961219	WO 1996-US9294	19960606	<--
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	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML					
	US 6284884	B1	20010904	US 1995-481883	19950607	<--
	CA 2223080	A1	19961219	CA 1996-2223080	19960606	<--
	CA 2223080	C	20070320			
	AU 9660953	A	19961230	AU 1996-60953	19960606	<--
	AU 706479	B2	19990617			
	EP 830380	A1	19980325	EP 1996-918253	19960606	<--
	EP 830380	B1	20030402			
	R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE, FI					
	HU 9900919	A2	19990628	HU 1999-919	19960606	<--
	HU 9900919	A3	20000428			
	JP 11507964	T	19990713	JP 1997-501648	19960606	<--
	JP 4001625	B2	20071031			
	AT 236194	T	20030415	AT 1996-918253	19960606	<--
	ES 2200067	T3	20040301	ES 1996-918253	19960606	<--
	PL 187822	B1	20041029	PL 1996-323822	19960606	<--
	ZA 9604822	A	19970107	ZA 1996-4822	19960607	<--
	IL 118603	A	20001206	IL 1996-118603	19960607	<--
	IL 136125	A	20060801	IL 1996-136125	19960607	<--
	NO 9705546	A	19980206	NO 1997-5546	19971202	<--
	US 6372222	B1	20020416	US 1998-25225	19980218	<--
	US 20020031526	A1	20020314	US 2001-861131	20010518	<--
	US 6602508	B2	20030805			
PRAI	US 1995-481883	A	19950607	<--		
	WO 1996-US9294	W	19960606	<--		
	IL 1996-118603	A3	19960607	<--		

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     US 1998-25225        A3    19980218  <--
RE.CNT  2     THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5   ANSWER 23 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Lysine-glycosylated recombinant interleukin-2
AB   The title protein, the carbohydrate moiety of which is added by chemical
     means, is claimed.  The carbohydrate moiety may be a mono- or
     oligosaccharide.  The glycosylation method comprises
     attachment of an ω-methoxycarbonylalkanol to the
     reducing end of the sugar followed by reaction with
     hydrazine.  The sugar acyl hydrazide so produced can be coupled to the
     protein in aqueous solution in the presence of dioxane, NaNO2 or t-Bu nitrite
and
     HCl, or in DMF.  Many glycosylated IL-2 proteins were prepared in
     this fashion.  These derivs. were more soluble in water than the
     nonglycosylated IL-2 and they retained their biol. activity.  Several
     glycosylated IL-2 proteins lost most of their T
     lymphocyte-activating ability while retaining most or all of their ability
     to enhance natural killer cell and lymphokine-activated killer cell
     activity.
AN   1994:480970  HCAPLUS <<LOGINID::20090609>>
DN   121:80970
OREF 121:14555a,14558a
TI   Lysine-glycosylated recombinant interleukin-2
IN   Linna, Timo J.; Sabesan, Subramaniam
PA   du Pont de Nemours, E. I., and Co., USA
SO   U.S., 17 pp.
     CODEN: USXXAM
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.         DATE
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PI   US 5312903           A     19940517    US 1990-531970          19900601 <--
PRAI US 1990-531970              19900601  <--
RE.CNT  6     THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5   ANSWER 26 OF 43  HCAPLUS  COPYRIGHT 2009 ACS on STN
TI   Improvement of emulsifying properties of egg white proteins by the
     attachment of polysaccharide through Maillard reaction
     in a dry state
AB   Dried egg white (DEW) was covalently attached to polysaccharide
     (galactomannan) in a controlled dry state (60°, 79% relative
     humidity) through the Maillard reaction between the ε-amino groups
     in the protein and the reducing-end carbonyl residue
     in the polysaccharide.  The resulting protein-
     polysaccharide conjugate had excellent emulsifying
     properties superior to those of com. emulsifiers, especially at acidic pH and
     high salt concentration  The safety of the conjugate was confirmed by
     using mammalian cells.  The growth-promoting activity of the
     DEW-galactomannan conjugate on CV-1 cells was the same as that
     of untreated egg white (Zou, C. et al., 1991).  Thus, DEW-
     polysaccharide conjugates may be useful as novel macromol. food
     ingredients.
AN   1993:190284  HCAPLUS <<LOGINID::20090609>>
DN   118:190284
OREF 118:32667a,32670a
TI   Improvement of emulsifying properties of egg white proteins by the
     attachment of polysaccharide through Maillard reaction
```

in a dry state
AU Kato, Akio; Minaki, Kazuaki; Kobayashi, Kunihiko
CS Fac. Agric., Yamaguchi Univ., Yamaguchi, 753, Japan
SO Journal of Agricultural and Food Chemistry (1993), 41(4), 540-3
CODEN: JAFCAU; ISSN: 0021-8561
DT Journal
LA English

L5 ANSWER 28 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI An oligosaccharide-tetanus toxoid conjugate vaccine against type III group B Streptococcus
AB An oligosaccharide-tetanus toxoid conjugate vaccine was developed against type III group B Streptococcus. Purified group B streptococcal type III capsular polysaccharide was depolymd. by enzymic digestion using endo-β-galactosidase produced by Citrobacter freundii. Following enzymic digestion, oligosaccharides were fractionated by gel filtration chromatog. on Sephadex G-75. An oligosaccharide pool of average mol. weight 14,500 (corresponding to 13.6 repeating units of the type III polysaccharide) was used for conjugation to tetanus toxoid. Tetanus toxoid was covalently coupled via a synthetic spacer mol. to the reducing end of the oligosaccharide by reductive amination. The oligosaccharide-tetanus toxoid conjugate elicited type III-specific anticapsular antibodies (measured in ELISA) in 3 out of 3 rabbits whereas the unconjugated native type III polysaccharide was nonimmunogenic. Antiserum from rabbits vaccinated with the oligosaccharide-protein conjugate protected mice against lethal challenge with live group B streptococci (16 out of 16 mice survived) and opsonized group B streptococci for phagocytosis in vitro. No protection was conferred by preimmune serum nor by serum from rabbits vaccinated with unconjugated native type III polysaccharide. An oligosaccharide -protein conjugate vaccine of this design may prove to be an effective immunogen for protection against group B streptococcal infection in humans. In addition, the approach to vaccine design utilized in these studies will facilitate further definition of the structural parameters that determine immune response to glycoconjugate vaccines.
AN 1991:4512 HCAPLUS <<LOGINID::20090609>>
DN 114:4512
OREF 114:911a,914a
TI An oligosaccharide-tetanus toxoid conjugate vaccine against type III group B Streptococcus
AU Paoletti, Lawrence C.; Kasper, Dennis L.; Michon, Francis; DiFabio, Jose; Holme, Kevin; Jennings, Harold J.; Wessels, Michael R.
CS Channing Lab., Brigham and Women's Hosp., Boston, MA, 02115, USA
SO Journal of Biological Chemistry (1990), 265(30), 18278-83
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L5 ANSWER 39 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Coupling of acid labile Salmonella specific oligosaccharides to macromolecular carriers
AB A coupling method for covalent attachment of acid labile oligosaccharides isolated from S. typhimurium O-polysaccharide to macromol. carriers is described. Arylamine groups were introduced into the terminal reducing end of oligosaccharides by reacting them with 2-(4-aminophenyl)-ethylamine. After subsequent conversion to the corresponding saccharide-phenylisothiocyanato derivs., saccharides were covalently linked to free ε-lysylamine groups of different carrier proteins. The resulting conjugates were highly

immunogenic and elicited in rabbits both anti-haptenic and anti-carrier protein specific antibodies. This coupling procedure can be used with oligosaccharides containing highly acid or alkali labile structures and (or) glycosidic linkages, it produces conjugates with high degrees of substitution at low saccharide/protein molar input ratios, it does not grossly affect the immunogenic specificities of the carrier protein, and it is suitable for preparation of highly substituted affinity columns, e.g., coupling to a polyacrylamide matrix.
AN 1979:202024 HCAPLUS <<LOGINID::20090609>>
DN 90:202024
OREF 90:32129a,32132a
TI Coupling of acid labile Salmonella specific oligosaccharides to macromolecular carriers
AU Svenson, S. B.; Lindberg, A. A.
CS Dep. Bacteriol., Natl. Bacteriol. Lab., Stockholm, Swed.
SO Journal of Immunological Methods (1979), 25(4), 323-35
CODEN: JIMMBG; ISSN: 0022-1759
DT Journal
LA English

L5 ANSWER 42 OF 43 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Use of 1-(7-aminophenyl)flavazoles for the preparation of immunogens with oligosaccharide determinant groups
AB Immunogens with oligosaccharide determinant groups, prepared by conversion of the sugar into its 1-(m-aminophenyl)flavazole and subsequent azo-coupling to protein, were elaborated with various oligosaccharides of the isomaltose-, maltose-, and cellobiose- series. Unsubstituted hydroxyl groups on positions 2 and 3 adjacent to the reducing end of the sugar were required, and the method appeared especially suited for oligosaccharides having a polymerization degree between 3 and 8. The procedure did not necessitate protection of the sugar hydroxyl groups. Oligosaccharide-flavazole-azo-edestin conjugates were tested for immunogenicity in rabbits and specific anti-oligosaccharide antibodies were formed in all cases. High titers of dextran-specific antibodies were obtained upon immunization with an isomaltoheptaose-flavazole-azo-edestin conjugate. Further applications of the method were discussed.
AN 1971:461385 HCAPLUS <<LOGINID::20090609>>
DN 75:61385
OREF 75:9711a,9714a
TI Use of 1-(7-aminophenyl)flavazoles for the preparation of immunogens with oligosaccharide determinant groups
AU Himmelspach, K.; Westphal, O.; Teichmann, B.
CS Max-Planck-Inst. Immunbiol., Freiburg/Br., Fed. Rep. Ger.
SO European Journal of Immunology (1971), 1(2), 106-12
CODEN: EJIMAF; ISSN: 0014-2980
DT Journal
LA English

=> s l2 and l3 and l6

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L8 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2009 ACS on STN
TI Synthesis and immunological properties of a tetrasaccharide portion of the B side chain of rhamnogalacturonan II (RG-II)
AB A highly convergent strategy was used for the synthesis of a tetrasaccharide [3-aminopropyl β-L-arabinofuranosyl-(1→3)-α-L- rhamnopyranosyl-(1→2)-[α-L-rhamnopyranosyl-(1→3)]- α-L-arabinopyranoside] portion of the B side chain of the plant cell-wall pectic polysaccharide rhamnogalacturonan II (RG-II). The terminal nonreducing β-L-arabinofuranosyl residue of the target compound was installed by using an arabinofuranosyl donor that was protected with a 3,5-O-(di-tert-butylsilane) group to facilitate nucleophilic attack from the β-face. The synthetic strategy also employed a chemoselective glycosylation of a trichloroacetimidate donor with a thioglycosyl acceptor; this gave a product that could be used immediately in a subsequent glycosylation. The reducing end of the tetrasaccharide contained an aminopropyl group to facilitate conjugation to keyhole limpet hemocyanin (KLH) and bovine serum albumin (BSA). Mice that were immunized with a KLH-tetrasaccharide conjugate produced antibodies that recognized RG-II isolated from Arabidopsis thaliana cell walls, but did not recognize RG-II obtained from red wine. Our data suggest that the arabinopyranosyl residue exists in the 4C1 conformation in the tetrasaccharide and in A. thaliana RG-II, whereas it has the 1C4 conformation in wine RG-II. It is proposed that differences in the conformation of side chain B might account for the ability of antibodies to discriminate between RG-II that was isolated from Arabidopsis and wine.
AN 2008:521237 HCAPLUS <<LOGINID::20090609>>
DN 150:191766
TI Synthesis and immunological properties of a tetrasaccharide portion of the B side chain of rhamnogalacturonan II (RG-II)
AU Rao, Yu; Buskas, Therese; Albert, Anathea; O'Neill, Malcolm A.; Hahn, Michael G.; Boons, Geert-Jan
CS Complex Carbohydrate Research Center, The University of Georgia, Athens, GA, 30602, USA
SO ChemBioChem (2008), 9(3), 381-388
CODEN: CBCHFX; ISSN: 1439-4227
PB Wiley-VCH Verlag GmbH & Co. KGaA
DT Journal
LA English

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT